

EXHIBIT 10

Bryson, Santana and Joshua v. Rough Country, LLC

Page 1

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
GAINESVILLE DIVISION

CASE NUMBER: 2:22-CV-017-RWS

SANTANA BRYSON, et al.,

Plaintiffs,

vs.

ROUGH COUNTRY, LLC,

Defendant.

* * * * *

THE ORAL PROCEEDINGS
OF THE DEPOSITION OF G. BRYANT BUCHNER
JULY 11, 2024

REPORTER: Paul Morse
Certified Court Reporter
and Notary Public

1 IT IS FURTHER STIPULATED AND AGREED
2 that the signature to and the reading of the
3 deposition by the witness is not waived, the
4 deposition to have the same force and effect as
5 if full compliance had been had with all laws
6 and rules of Court relating to the taking of
7 depositions.

8 IT IS FURTHER STIPULATED AND AGREED
9 that it shall not be necessary for any
10 objections to be made by counsel to any
11 questions except as to form or leading
12 questions, and that counsel for the parties may
13 make objections and assign grounds at the time
14 of the trial, or at the time said deposition is
15 offered in evidence, or prior thereto.

16 IT IS FURTHER STIPULATED AND AGREED
17 that the notice of filing of the deposition by
18 the Commissioner is waived.
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I N D E X

EXAMINATION

	PAGE
By Mr. Hill.....	6
By Ms. Cannella.....	296
By Mr. Hill.....	304

EXHIBITS FOR THE DEPOSITION

	PAGE
Exhibit 1, Mr. Buchner's Report.....	7
Exhibit 2, Rebuttal Report.....	178
Exhibit 3, PowerPoint.....	186
Exhibit 4, PowerPoint.....	251
Exhibit P1, Example Image.....	303

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Bryson, Santana and Joshua v. Rough Country, LLC

Page 4

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
GAINESVILLE DIVISION

BEFORE:

Paul Morse, Commissioner.

APPEARANCES:

RICHARD HILL, ESQUIRE, of WEINBERG,
WHEELER, HUDGINS, GUNN & DIAL, 3344 Peachtree
Road, Suite 2400, Atlanta, Georgia 30326,
appearing on behalf of the Defendant.

TEDRA CANNELLA, ESQUIRE, of CANNELLA
SNYDER, LLC, 315 West Ponce de Leon Avenue,
Suite 885, Decatur, Georgia 30030, appearing on
behalf of the Plaintiff.

DEVIN MASHMAN, ESQUIRE, of CANNELLA
SNYDER, LLC, 315 West Ponce de Leon Avenue,
Suite 885, Decatur, Georgia 30030, appearing on
behalf of the Plaintiff.

ALSO PRESENT: Jess Wiggins, Video

* * * * *

Bryson, Santana and Joshua v. Rough Country, LLC

Page 5

1 I, Paul Morse, CCR, a Court Reporter of
2 Mobile, Alabama, acting as Commissioner,
3 certify that on this date, as provided by the
4 Federal Rules of Civil Procedure and the
5 foregoing stipulation of counsel, there came
6 before me via Remote Videoconference, beginning
7 at 10:00 a.m., G. Bryant Buchner, witness in
8 the above cause, for oral examination,
9 whereupon the following proceedings were had:

10
11 THE VIDEOGRAPHER: Today's date is
12 July 11, 2024. And the time is 10:15 a.m.
13 This will be the videotaped deposition of
14 George Bryant Buchner.

15 Would counsel present please identify
16 themselves for the record, starting with the
17 taking attorney.

18 MR. HILL: This is Rick Hill on
19 behalf of Defendant Rough Country.

20 MS. CANNELLA: Tedra Cannella and
21 Devin Mashman on behalf of the Plaintiffs, the
22 Bryson family.

23 THE VIDEOGRAPHER: Thank you.

1 Would the Court Reporter please swear in the
2 witness.

3
4 G. BRYANT BUCHNER,
5 having first been duly sworn, testified as
6 follows:

7
8 EXAMINATION

9 BY MR. HILL:

10 Q. Thank you, Mr. Buchner. I'm going
11 to start with your May 8, 2024 letter to
12 Ms. Cannella. And I will share my screen or at
13 least attempt to share it --

14 A. Okay.

15 Q. -- and put that letter up. I'm
16 sure you probably have it there in front of
17 you.

18 A. I'm really bad on dates. So I'll
19 look at it and see what we're -- what we're
20 talking about when you pull it up.

21 Q. All right. Are you able to see
22 the screen now?

23 A. Yes, sir.

1 Q. All right. This is a letter from
2 you to Ms. Cannella dated May 8, 2024. It's
3 bates labeled Bryson 09348 through 09377. And
4 I'd like to mark this as Exhibit 1 to your
5 deposition.

6 (Defendant's Exhibit Number 1
7 is marked for identification.)

8 A. Can we call it the FR26 amended
9 report? Because that's -- that's why I didn't
10 know what you were talking about. I'm okay if
11 you call it a letter. But I'd rather call it
12 the amended report.

13 Q. Sure. The Re line says FR26
14 amended report. And so I'll reference it by
15 that name.

16 A. Thank you kindly.

17 Q. Sure. In the first paragraph
18 you'll see that you use -- you state that an
19 unforeseen technical issue resulted in the loss
20 of the original simulation file. Just so we're
21 clear, what do you mean by an unforeseen
22 technical issue?

23 A. Well, I think that the simulation

1 was run in October-ish of '23. The depo was in
2 January. And I hadn't opened the file or
3 looked at it. And when we went to retrieve it,
4 it basically didn't exist. The run file did
5 not exist. And so we could not -- we did
6 everything we could to try to locate it and
7 find it. And all that we can think of is that
8 something happened during the save process.

9 And so I had -- just had no idea that that
10 thing wasn't there. I hadn't looked for it in
11 months. So that's -- that's the unforeseen
12 technical issue. It happens to, you know, all
13 of us at times when you think you've saved
14 something and it didn't get saved properly or
15 maybe there was a corruption in the -- you
16 know, on the computer disc somewhere. I don't
17 know.

18 Maybe somebody opened it later on and
19 thought it was something else and moved it to a
20 folder and we can't find it. I don't know.

21 Q. What is the process after you run
22 an HVE simulation to save the files associated
23 with that simulation?

1 A. Well, it -- it really ought to be
2 saved and moved into the -- you know, into the
3 job file and put into engineering analysis,
4 which you've probably seen my EA folders,
5 engineering analysis folders. It wasn't --
6 that -- that final step apparently didn't
7 happen. It was still on the simulation
8 computer. At least that's where we thought it
9 was. And but it didn't -- it just wasn't in
10 any other place. I don't think it ever got
11 moved was the problem. That's the reason I --
12 I needed to go get a copy of it.

13 Q. And when you say later on in
14 this -- on this page that -- at the bottom you
15 said since the simulation had been corrupted,
16 what do you mean by the term corrupted?

17 A. Well, whatever we found did not --
18 we went back to the archives and everything.
19 We never found anything that looked like the
20 accident one. And it's even suspect that the
21 printout that I was using was -- was from the
22 one that I had looked at back in October.

23 So the word corrupted is kind of a general

1 term between losing it, between, you know,
2 not -- not having the right data. It's just --
3 it was meant to be a -- I think originally we
4 thought maybe it had been corrupted. But in
5 the end I think it's -- corrupted, the term
6 changed or something. But it couldn't be
7 opened.

8 But in the end, we -- we've never found one
9 that we think was it, period.

10 Q. So when you produced the printouts
11 prior to your deposition in January that
12 related to this original simulation, are you
13 saying that you are not sure whether those
14 printouts were the same printouts or data that
15 you were looking at when you ran the original
16 simulation in October? Explain that to me.

17 A. Yeah. That -- that's true. Back
18 in October I looked at the data. I looked at
19 the answers. They were printed -- or at least
20 I asked for them to be printed. I don't -- you
21 know, I'm not the printer guy or the filer guy.
22 And it's almost as if what was picked up was an
23 early iteration or something because some of

Bryson, Santana and Joshua v. Rough Country, LLC

Page 11

1 the data was just wrong.

2 And so I -- you know, it was months before,
3 but I thought that we had had -- that we had
4 all of that. And during the deposition, I
5 clearly said, no, these are all of the reports
6 that are there. I hadn't gone back and
7 checked. They clearly weren't all of the
8 reports. And so we went and just did
9 everything we could, and we could not resurrect
10 anything that I can be confident was what I had
11 looked at back in October.

12 So we can make some guesses. But I can't
13 make -- I can't know. So my opinions are --
14 you know, were well recorded in my depo and,
15 you know, the opinions haven't changed. But we
16 really just had to re-enter the data. And we
17 made an improvement or two, you know, that --
18 you know, to make sure that we had it right
19 like the 0.04 inches on the tire or something
20 like that, whatever it was. But you know, so
21 at the end of the day, we don't have anything
22 that survived that I can validate as being what
23 I looked at back in October.

1 But what we have now is -- is a
2 representation of everything I said in my -- in
3 my deposition. And it gives the right answers.
4 It gives the same answers that I thought I had
5 at the time of the depo.

6 Q. When did you discover that the
7 printouts that you provided to us related to
8 the original simulation that were provided a
9 week before your deposition in January, when
10 did you discover that those were not correct or
11 did not have the, you know, appropriate data
12 reflecting the simulation that you produced
13 that we discussed in your first deposition?

14 A. Well, it -- I mean, it may have
15 been a couple of months. We were under the
16 mistaken belief that we were just looking for a
17 file. And then as time went on and we kept
18 peeling back, looking and thinking, we went all
19 the way back and finally opened that up and
20 looked and said, okay, let's try to rerun with
21 this data. And then we started trying to do
22 the rerun and we realized things weren't -- I'm
23 going to use the -- things were consistent with

1 what I'd said in my deposition. So I mean, it
2 was -- and we had other work that was going on.
3 We had prepared for the depo, and we were busy
4 with other things.

5 And so what I thought was a simple, hey, go
6 find the file and present it kept getting
7 harder and more complicated and more
8 complicated. And we kept realizing that we had
9 a bad concept, which is that we were just
10 looking for a missing file. What we were
11 looking for was something that probably didn't
12 exist.

13 Q. So just to be clear, when you run
14 an HV simulation, it produces a graphical
15 depiction of the crush --

16 A. Yes.

17 Q. -- based on the simulation.
18 Correct?

19 A. Yes. If you -- if you ask it to,
20 it will.

21 Q. Right. It can do that?

22 A. Yes.

23 Q. And that was produced with regard

1 to your original simulation prior to your first
2 deposition?

3 A. Yes.

4 Q. And was that graphical
5 representation of the crush with the other data
6 that's on there, was that consistent with the
7 HV simulation that you actually ran in October,
8 or was that also corrupted as well?

9 A. I -- all I have is the images.
10 I -- I can't tell. That's part of the problem.
11 So we've generated new images. You can't tell
12 the difference in the new images and the old
13 images, at least I can't visually looking at
14 them because the -- the crush is very similar.

15 In other words, it would take -- you know,
16 you'd have to make some pretty fine
17 measurements to see if there's differences.
18 But so I don't know. What I know is that what
19 we've -- what we have provided in this
20 supplemental report is consistent with what
21 I've said in the deposition. And it's -- and
22 we have made sure as best of our ability to get
23 the numbers that I used in my deposition the

1 way I said I thought we had run it correct
2 here.

3 Q. All right. I appreciate that.
4 But I'd like to just first talk about the
5 original simulation. We'll get to the rerun or
6 amended simulation. But with regard to the
7 original simulation that was produced to us in
8 October of 2023 and upon which your initial
9 deposition was based and upon which your report
10 was based, I want to make sure I'm
11 understanding. What you produced to us in
12 January that related to that original
13 simulation, not just the backup files but also
14 the results of the simulation, are you saying
15 that you can't confirm that anything related to
16 the simulation that was produced to us prior to
17 your deposition was actually representative of
18 the October simulation that you ran that you
19 based your opinions on?

20 A. Okay. Really long question. Ask
21 the last part of it so I know the crux of the
22 question. I heard every -- I heard the lead-in
23 really well. I didn't hear the question really

1 well.

2 Q. Sure. Sorry if it wasn't crafted
3 very artfully. Let me try to make it simpler.

4 So you just said that the graphical
5 representation of the crush and the data on
6 that that was produced to us prior to your
7 deposition, that it -- you can't confirm
8 whether it actually is representative of the
9 simulation you ran in October of 2023?

10 A. Not exactly. It is -- it is
11 representative in that I can't tell the
12 difference between it and what we ran. In
13 other words, it looks -- it looks like what I
14 remember. It looks like what our results are
15 today. But I can't tell you if it actually was
16 the printout from it. But the crush that's
17 shown there is -- is representative because
18 it's indiscernible from the crush that we know
19 is reasonable and accurate in the rerun.

20 Q. Right. When you --

21 A. Yeah. So thank you.

22 Q. Well, that's a -- that's a good
23 answer. But even though it may be similar or

1 representative, you can't verify that it's the
2 actual result of the -- the original
3 simulation?

4 A. Right. It was indiscernible to me
5 from the actual result.

6 Q. Right.

7 A. But I can't tell you if that was
8 actually printed from the actual result. But I
9 can tell you that it was good enough that it --
10 that I did not detect it when I was using it
11 for the deposition.

12 Q. Right. And the same question with
13 regard to all of the backup files that related
14 to that original. I don't want to go through
15 every one individually, so we'll start it with
16 a broad question.

17 You have a certain number of backup files,
18 an environment file, this file, that file. Is
19 the same true that all of those files that
20 were -- that were printed and produced to us,
21 the ones you could find prior to your
22 deposition, you can't verify if those were the
23 actual files that were generated when you ran

1 the original simulation?

2 A. I don't -- I don't think at the
3 end of the day they were. I mean, that's part
4 of my problem that, you know, that work had
5 been done back in October. Somehow in the
6 saving and filing process, what we -- what I
7 was looking at and what I did, did not make it
8 into the file.

9 Q. Okay. And so another way maybe to
10 put it would be the October simulation upon
11 which you base your report was not saved and
12 put aside in the file in the form that it
13 existed when the original simulation was run?

14 A. Yes.

15 Q. And then when you went to produce
16 it prior to your deposition, you went back in,
17 and it had been changed or corrupted or
18 something was different about it when you went
19 back in to produce it to us prior to your
20 deposition?

21 A. Right. We could never find a file
22 that we had any confidence -- or that was the
23 file that we had used in October. It just --

1 just we could not in any shape, form, or
2 fashion locate that. So we had to redo it.

3 Q. Okay. And so none of the data
4 files, whatever, related to the original
5 simulation upon which you based your -- your
6 initial report in October exist as this -- as
7 of this time, at least that you can find?

8 A. That is true.

9 Q. Okay. And when did you discover
10 that all of the data and all of the files
11 related to that original simulation no longer
12 existed?

13 A. Like I said, it took a couple of
14 months. We were working on other things. I
15 thought it was a simple procedure. It happens
16 commonly that a file gets left on another
17 computer, doesn't make it in, or a miscopy is
18 put in. And we were doing other work that was
19 scheduled. And every time I inquired, we're
20 working on it and we thought somebody would say
21 they -- they did something. And when I
22 investigated, I said no, this isn't it; you've
23 got to keep looking. And then eventually, you

1 know, we -- it took a couple of months. I
2 don't know the exact time. But it wasn't a
3 week for sure. It was unfortunately an
4 extended period of time because I was -- I
5 thought it was going to be an easy process, and
6 it wasn't. And then in the end, you know, it
7 took more -- a couple months or more.

8 Q. And when you say it took a couple
9 months or more, you mean from when? From the
10 time of your deposition?

11 A. Oh yeah. It was months after the
12 deposition.

13 Q. That's what I'm trying to clarify.

14 A. Yes. But I don't know how long.
15 I'm just trying to give you an approximate
16 feeling for the timeframe. It wasn't days or
17 weeks. It was months. I don't know how long.

18 Q. And so you don't know an exact
19 date that you finally realized, hey, not only
20 can we not find the missing files, but the
21 files that we produced during the deposition
22 were not connected with the initial simulation.
23 You -- those were two different discoveries.

1 Right?

2 A. Ask that question again.

3 Q. Sure. So there were certain
4 backup files that were missing at the time of
5 your deposition. There was -- there was no
6 data produced of any type at your deposition.
7 Correct?

8 A. No. You're --

9 MS. CANNELLA: Object to the form
10 of the question as vague.

11 A. The -- the HVE run files were not
12 produced at the time of the deposition.

13 Q. Right.

14 A. Some printout reports -- some
15 printout reports were produced. Thank you.

16 Q. Right. And so you thought you
17 were just looking for the missing HVE run file
18 at the time after --

19 A. After -- when I -- when I walked
20 out of my deposition, I thought I was missing
21 whatever HVE files were used to generate the
22 reports that I -- that were in the book in the
23 deposition. Yes.

1 Q. Right. But you believed the files
2 that you did print and produce were actually
3 accurate and associated with the original
4 simulation?

5 A. Yes.

6 Q. Okay. And so that's two different
7 discoveries. One is we can't find the HVE run
8 file. Right?

9 A. Yes.

10 Q. And two is, oh, the files we did
11 produce were not associated with the original
12 simulation?

13 A. Well, the reports we did produce,
14 yes.

15 Q. Right. And so when did you
16 discover that the reports that you produced
17 were not associated with the original
18 simulation?

19 A. Well, that took a long time, as I
20 said earlier, because we thought we were just
21 looking for a missing electronic copy. When we
22 couldn't find that, then we said, okay, we need
23 to reproduce a reasonable electronic copy.

1 We started trying to use the reports, and I
2 found some things that -- that were
3 inconsistent with what my memory was as to what
4 should have been there. So suddenly we started
5 looking at those reports and we realized, hey,
6 something -- something looks like it happened
7 on that level as well. So that took a while.
8 It was -- it was not weeks or days. It was --
9 it was, you know, over a month for sure.

10 Q. How did the reports survive but
11 the HVE run files did not?

12 A. Okay. Well, and that's -- I've
13 already alluded to that. But at the time of my
14 deposition, I thought all of the reports had
15 been printed and that's what I testified to. I
16 thought they had just been printed and put in
17 the file. That's what me belief was back in
18 October when we did it. But what was there was
19 only partial reports.

20 And so somehow in the printing process --
21 and whoever was getting them or whoever was
22 filing them, what -- what I was using back in
23 October did not end up in the file.

1 Something -- something from another preliminary
2 effort, you know, made it in there. That's --
3 so it's a filing error. That's -- that's all
4 that happened. I don't know what it was. I
5 had no idea other than when I tried to
6 validate what I testified to, what I had
7 recorded as, you know, what the runs showed me
8 and what I tried to testify to, it didn't -- it
9 was inconsistent with what I had that was in
10 the file.

11 Q. And you just alluded to you think
12 those were preliminary runs, meaning runs done
13 prior to your original simulation?

14 A. Right. The -- all simulations are
15 iterative. All calculations are iterative.
16 You have to start building it and work on it.
17 But there were -- yeah, so it's just -- this --
18 that was not the final work that was there
19 and -- period.

20 Q. But it existed in January. And
21 you went to print them out to produce them for
22 your deposition?

23 A. No. No. They had been printed

1 way back in October. And I hadn't touched them
2 for months. I didn't even -- I didn't even
3 look at them getting ready for the deposition
4 because they -- all of that work had been
5 finished in October, to my knowledge, and it
6 had been put in the file. And we had
7 summarized the results in I think the -- the
8 FR26 report we did, and that's what I was
9 using.

10 Q. Okay. So that's what I want to
11 make sure I understood. So the printouts of
12 the reports that were produced, including the
13 results of the simulation, you're -- you're
14 saying those were printed out back in October
15 contemporaneous with the running of the
16 original simulation?

17 A. Well, that's -- that's the problem
18 is I don't know because the -- my -- look, my
19 intent is to do the work and then file the
20 work. Do the work, file the work, use the
21 work. I -- something happened between when I
22 did that and wrote the report. I don't
23 remember the date of the report. Does anybody

1 remember the original report? Because it will
2 help me.

3 Q. October 13, I believe.

4 A. Okay. So that's why I keep saying
5 I didn't -- as we were writing that report, I'm
6 using -- I'm looking at something on a computer
7 screen, and I'm doing my work. I'm getting my
8 report done. Then months later I -- you know,
9 I believe that that stuff has been properly
10 filed by my staff. And -- and you know, I
11 mean, heck, it could be me that didn't hand the
12 right document. I thought something had been
13 printed.

14 I'm not blaming anybody. I'm just saying
15 something happened with whatever I was using in
16 October that I relied on that was still there
17 in January. I testified using my final report.
18 And then when I tried to give it to you or
19 referenced it, it -- the documents that I
20 thought were there weren't there. That's --
21 that's what happened.

22 I -- if I had known there was a mistake in
23 October, I would have -- I gladly would have

1 fixed it, you know, before the deposition or
2 would have, you know, reproduced that work.
3 I -- I just didn't know. We had too many other
4 things we were working on in this case and
5 other cases that -- I had confidence in my
6 filing process. And anybody that's ever tried
7 to file anything knows that that happens from
8 time to time.

9 Q. All right. Well, whatever reports
10 are associated with your original simulation --

11 A. Uh-huh.

12 Q. -- or let me -- or scratch that.
13 I'll ask it a different way.

14 The reports related to an -- no. Scratch
15 that. Let me think through this a second.
16 Hold on.

17 You -- your office produced to us prior to
18 your deposition in January of 2024 reports
19 related to an HVE simulation. And are you
20 telling me that you can't identify when those
21 documents were printed that were produced to us
22 prior to your deposition?

23 A. No, I didn't -- I don't know. I

1 know what my intent was with what I was using.
2 But as I sit here, I -- I don't know. That was
3 a -- that was some kind of a problem that
4 happened. And I don't know when it happened
5 exactly. But I do know that when I wrote my
6 report in October 12, I think is what you told
7 me, 2023, I had data that I was using. And
8 I -- you know, it's not uncommon for me to have
9 my working copy that I'm using to type the
10 report, and then my work copy goes in the trash
11 can.

12 And the file copy is supposed to be in the
13 file. Well, that file copy wasn't what I used
14 to do my FR26 report. I mean, that's just --
15 and then the electronic file was supposed to be
16 there to go back and resurrect. It -- it's not
17 there.

18 Q. So you don't know when the file
19 copy was printed that was produced to us? That
20 was my question.

21 A. My -- my belief was it would have
22 been done back in August. But I mean, it's
23 possible someone, you know -- I said August.

1 In October is what I meant. I don't -- I don't
2 know.

3 When I started this conversation, I would
4 have said it was in October because that's when
5 it was supposed to have been. But as I sit
6 here, I didn't do the printing of that
7 document. And I didn't do the filing of that
8 document to the best of my knowledge. And it's
9 not the same document I was using when I did my
10 October letter.

11 Q. Prior to -- sorry. Go ahead. I
12 didn't mean to --

13 A. So the answer is I don't know.
14 Thank you.

15 Q. And prior to your deposition, you
16 also produced some digital files related to the
17 HVE simulation. Correct?

18 A. I don't remember that.

19 Q. Okay. We asked for you to produce
20 the actual digital files that related to your
21 HVE simulation. And my understanding is that
22 you produced to us the digital files you could
23 find, but you couldn't find the HVE run file.

1 Is that your understanding?

2 A. I don't -- I don't remember that.
3 My memory is just not -- it's just blank on
4 that. I don't know. If you have those files,
5 that's great. If you don't, I don't -- I don't
6 know the answer to the question.

7 Q. Well, they would obviously
8 represent the printouts. And so if those files
9 were actually produced, you don't know, you
10 know, if they relate to the original simulation
11 or not. Right?

12 A. Because I don't know what files
13 you're talking about. I can't even answer the
14 question.

15 Q. Okay. When you did the rerun,
16 you -- you did properly save the HVE files
17 related to the rerun. Right?

18 A. And those were -- and those were
19 sent out with the amended report. My
20 understanding is you should have those, yes.

21 Q. Right. And what was the process
22 used to save those files?

23 A. I don't know. I didn't do that.

1 It was -- it was done by the gentleman that
2 input the data. And I haven't actually opened
3 that file myself. I said -- I verified that
4 that file is this file that I have these
5 reports from. He said he did that. And then
6 that was sent to you.

7 Q. Okay. So explain that to me. So
8 you don't actually run the simulation. You
9 just provide instructions for someone else to
10 run the simulation?

11 A. No, I'll never open it and I'll
12 never save it. I'll go -- I will go make
13 adjustments to it or look at it and I will sit
14 with him when he does that as needed. Yes.
15 But I'm not the -- I don't open/take care of
16 the HVE software suite. All of that is done by
17 someone else. I'm a user of it. And I don't
18 end up saving it because we -- I don't want to
19 make a mistake on it. I want the person who's
20 running that to -- to do that job.

21 Q. Who is --

22 A. And I can't run them on my
23 computer in here because I don't have the right

1 licenses. That's on another computer.

2 Q. Who was the person that performed
3 that job with regard to the original
4 simulation?

5 A. Jacob Brennan.

6 Q. All right. And so who performed
7 that job with regard to the rerun?

8 A. Jacob Brennan.

9 Q. Okay. And you're saying that you
10 don't know the process for saving and
11 preserving the HVE files, that I would have to
12 have -- ask Jacob about that process?

13 A. No. You click save, and it goes
14 on that computer. And then you take a copy of
15 that, and you put it, you know, on the server
16 where it could be provided to people like you.
17 That's -- I don't -- you know, that's the same
18 for every single file. Everybody in the
19 building has their own work and they save it
20 how they want to under what name they want and
21 just put it on the server. And then I -- you
22 know, if I want to change the name of it or
23 something, I can. But it's the same -- I don't

1 know what -- I mean, I wasn't there when he
2 clicked the button. But we all know how to
3 save a file.

4 Q. Okay. And how do you review it
5 once he runs the report? Does he print it out
6 for you? Do you click on the report on a
7 computer? How do you review it once it's been
8 run?

9 A. All of the above. I mean, it
10 depends on how I want to do it that day.

11 Q. Okay. And so you might actually
12 access the actual file on your computer and
13 look at it in digital form?

14 A. You may be misleading there.

15 Q. Okay.

16 A. If it's -- if it's saved as a
17 PDF --

18 Q. Okay.

19 A. -- I can access it and read it at
20 my computer. But I can also print it and then
21 just look at it in hard copy form. However I
22 want to do it on that day depending on what my
23 schedule is and what I'm -- you know, what my

1 needs are. I mean, someone else may be -- you
2 know, it may be better for me to go to a
3 conference room where I can spread out. It
4 depends on what I'm -- on what's convenient for
5 me on that day.

6 Q. Right. I guess what I'm trying to
7 clarify is you're not actually going into the
8 HVE software and opening up that. You're
9 looking at it either in a PDF of the results or
10 a printed version of the results?

11 A. Right. Of the report. And but --
12 but when he's running it, I have the option to
13 go back in sitting with him. And you know, if
14 he has a question, I'll drop in and -- and, you
15 know, talk about what's going on and where he
16 is or he can come and, you know, make a choice
17 for him. Or if he wants he'll come down here
18 and ask me a question when he's doing it.

19 So you know, it's all of the above. It's,
20 you know, pretty normal stuff. It's the way
21 all of our technical programs work.

22 Q. Right. So -- so you might sit
23 there and advise him at his computer station

1 with regard to modifications or inputs into the
2 software?

3 A. Sure.

4 Q. Right. But then when you go to
5 review the results, you're going to look at the
6 results that have been generated and converted
7 to a PDF file?

8 A. Well, I can -- I can look at them
9 on his computer as well over his shoulder
10 before he saves them as well.

11 Q. Right. Which did you do in
12 preparing your October 2023 report?

13 A. I would have had something I could
14 work from. I mean, as I told you earlier, I
15 mean, I would have had a working copy for me
16 that's just a working copy. If I want to edit
17 a report, I'll print it out and I'll edit it
18 and I'll get on the computer and make the
19 changes and then I'll throw the working copy
20 away --

21 Q. Right.

22 A. -- because it's just a working
23 copy. So I don't remember at this time exactly

1 how I did that. But I do know that when I
2 wrote the report, I was looking at outputs that
3 I was confident from a -- were the
4 representative simulation run that I was
5 intending to run at that time.

6 Q. And those outputs would have been
7 either a printed format or a PDF file?

8 A. Potentially, yes. I don't know.

9 Q. And in order to print them, you
10 have to convert them to a PDF file. Correct?

11 A. Usually, yes.

12 Q. Okay.

13 A. But I'm not -- you know, he can --
14 he can probably print them directly. I don't
15 know. I have not done the printing out of the
16 program. I'd have to go see. I don't know if
17 he can print just directly from
18 Engineering Dynamics HVE Suite. I don't know
19 the answer.

20 Q. Well, with regard to the rerun,
21 after he ran the report, he created a PDF file
22 which you then used to produce to us prior to
23 this deposition.

1 A. Yes.

2 Q. Correct?

3 A. Yes. And that's what -- that's
4 what I thought had been done in a proper
5 fashion before the first deposition. I thought
6 I was using -- I thought I had in the file a
7 complete file of what was then printed because
8 that's what I testified to. That's what was my
9 understanding. But it wasn't -- it wasn't
10 accurate.

11 Q. The actual HVE files are different
12 obviously from the PDF file that is just a -- a
13 collection of the results. Those are two
14 different types of files. Correct?

15 A. Yes.

16 Q. All right. And -- well, scratch
17 that. That's enough. On the second page of
18 what I have up on the screen bates labeled
19 9349 --

20 A. Yes, sir.

21 Q. -- second paragraph you say our
22 attempts to precisely reproduce the simulation
23 discussed in your October 12, 2023 report were

1 unsuccessful because data used in that
2 simulation was lost.

3 Did I read that correctly?

4 A. Yes.

5 Q. And my question is, there were
6 printouts and data from -- that were produced
7 to us that were believed to be from the
8 original simulation. And so when you say the
9 data was lost, what do you mean by that?

10 A. Two fold. Potential answers and
11 then you can choose what's relevant to your
12 question. I've already told you that the run
13 files were lost and -- and the -- whatever
14 files were used to generate the documents that
15 I used to do my initial report as far as the
16 electronic copies were not present.

17 The second thing is, in the reports that
18 were printed out, HVE does surrounding and
19 doesn't report all of the input data
20 necessarily. So -- so numbers can have
21 extended decimal places beyond what the report
22 shows. So let's say a 0.8 might show up as a
23 one because of rounding. Because of that

1 it's -- when we tried to use the data that was
2 shown, we just did not -- we knew that -- that
3 that was not accurate to what had been used
4 because it didn't produce the right result. So
5 the -- I think it's a 17.92 mile per hour
6 delta-V for the F-250 wasn't working. So what
7 it means is the reported -- the reports are
8 incomplete as far as to the level of detail
9 that's needed sometimes to regenerate the --
10 the run.

11 So on two levels, we just could not -- we
12 could not use what we had to reproduce the
13 simulation run. So we just -- like I said, it
14 took a couple of months to figure out that it
15 wasn't going to work. And then we just said,
16 okay, let's just rerun with the input data that
17 we know is accurate, the weights, the
18 delta-V's, everything, and you know, just do it
19 the way that I said in the deposition. And
20 that's what we have today.

21 Q. When you first attempted to
22 reproduce the original simulation with the data
23 that you had, did you save that simulation run?

1 A. Well, no because we were still
2 under the confusion that we could do that. In
3 other words, we didn't -- basically if someone
4 wanted to try to reproduce -- wanted to put the
5 data we have in, I mean, they could do it and
6 they'd get the same answer we'd get. But we
7 didn't understand the problem fully. It took a
8 while to discover all of the problems. So no,
9 we weren't -- we didn't even know what problem
10 we were solving at that time.

11 Q. All right. Did you -- I know
12 you're saying the data that you used from the
13 printouts you produced to us did not create the
14 result that you expected. Was there any
15 missing data or was it just you had all of the
16 data but it didn't -- it wasn't correct?

17 A. There's missing data as well. The
18 reports -- remember, not all of the reports
19 were printed. I told you that. There just --
20 there was missing data. And we couldn't -- we
21 realized we were going to have to start adding
22 to those reports. And then we also knew that
23 the report numbers weren't precise. So you

1 couldn't just input the report numbers. You
2 wouldn't get a robust answer. I mean, you'd
3 probably get, you know, an approximate answer.
4 But we wanted the right answer, similar to what
5 was in my FR26 report.

6 Q. All right. So obviously if you're
7 not able to reproduce the original simulation
8 based upon the data you have, you wouldn't
9 expect anyone else to be able to reproduce your
10 original simulation because the only data they
11 would have would be the same data that you had?

12 A. Well, they could use my deposition
13 and -- and the file materials that I had and
14 pluck the data out of my deposition and the
15 file materials and input it, and they would get
16 a very similar result to what we have, yes.
17 They could do it that way. But you could not
18 use the reports, just like I couldn't use the
19 reports. Nobody could use those reports to get
20 it as accurate as it should be.

21 Q. How many simulations have you run
22 beyond the original simulation and the rerun
23 simulation?

1 A. I don't -- I don't know.

2 Q. You haven't saved any other than
3 the rerun simulation. Correct?

4 A. Now, there will be -- some of our
5 attempts are archived. In other words, some of
6 the process that we used is archived. It's not
7 relevant though to my final opinions if you
8 want to do a forensic examination of the
9 process. You know, I mean, there's something
10 around you could use for that. But I'm here to
11 give opinions about a particular accident. And
12 so I'm confident in what we have given you.
13 But yeah, some of that process is saved. But
14 it's -- it was basically put aside because we
15 realized that we didn't have the files to do
16 it. And then we just redid it per my
17 deposition, per the data in the file, per the
18 right everything and -- and ran it.

19 Q. And those archived files related
20 to your other run simulations, they've not been
21 produced to Ms. Cannella. Correct?

22 A. No. Because they're not relevant
23 to my opinions.

1 Q. They relate to your work in this
2 case though. Correct?

3 A. But not work to give my opinions
4 in the -- in what happened in the accident.
5 They only relate to us trying to find a missing
6 file and missing data. So we worked really
7 hard, but that was -- and that's -- that's just
8 bonus -- that's a bad word to use. That's --
9 that's work that we did trying to fix a
10 problem.

11 But as far as my -- and that had nothing to
12 do with my analysis of this accident. That
13 just had to do with trying to -- trying to
14 resurrect information. So practically you have
15 everything that we did to fix the simulation
16 run to be accurate for the use of engineering
17 on this file. If there's some in between
18 that's unrelated -- and that's what I'm telling
19 you about in our efforts to resurrect it -- we
20 do have some stuff for that. But no, that
21 hasn't been given to anybody because it's not
22 worth anything as an engineering opinion.

23 Q. Are there any other archived files

1 other than what you've described that you
2 haven't produced to Ms. Cannella that relate to
3 your work in this case?

4 A. Oh, they don't relate to my work
5 in this case. They relate to my work to try to
6 find the file and try to -- try to use a file
7 that, you know, was corrupt. But no, there's
8 nothing -- you have everything I'm using for my
9 opinions. You have everything that I have done
10 in this simulation to try to -- well, to
11 reproduce the work and even, you know, slightly
12 improve the work, consistent with my
13 deposition. You have that.

14 Q. All right. When did you first
15 become aware of the date of Wes Grimes's
16 deposition, your counterpart for the Defense?

17 A. I knew of it. I'm guessing, but
18 it's, you know, a few weeks at most before
19 that.

20 Q. Okay. So --

21 A. His deposition date is not
22 particularly an issue for me.

23 Q. Right. But I'm -- I'm curious

1 when were you told about his deposition date.

2 Do you recall?

3 A. I don't.

4 Q. All right. Did you -- did you
5 talk with Ms. Cannella and help her to prepare
6 for that deposition?

7 A. If anybody remembers when Wes
8 Grimes's materials were produced, that -- I'm
9 sure I looked at those and told her what we
10 saw. And I remember one thing very
11 specifically. So yes, I did help her in some
12 way. Yes, I did.

13 Q. All right. And what was the
14 date -- the date that you ran the rerun
15 simulation, or at least when you finalized it?
16 We know that you did some preliminary runs that
17 haven't been produced that weren't the final
18 run that you're relying upon. But when did you
19 produce the final simulation run that you've
20 produced to us and that you're relying upon in
21 this case?

22 A. Yeah, I disagree with your
23 characterization. But I understand the

1 question. So when was it run? I don't know
2 off the top of my head. There may be a date on
3 it if I can find it here. This is the FR26.
4 You've got it up right there. All you have to
5 do is look at the top and see if there's a
6 date.

7 Q. I don't whether it's when it was
8 printed or when it was run. But if you look at
9 appendix B that I have up on the screen -- it's
10 not showing up for some reason. I don't know.
11 I want you to verify, it has a date on what you
12 produced as appendix B of May 8, 2024, 17:10.
13 Is that the date that you ran the simulation?

14 A. That -- I don't know. It could
15 just be -- the simulation can be run on that
16 date to generate all of the reports and printed
17 on that date. Yes, sir. I don't know if
18 that's the exact date it was originally run.
19 But it was probably rerun on that date to make
20 sure we had the right copies printed out so
21 that whatever adjustments or whatever inputs
22 had been refined for the report were accurate
23 to the report.

1 Q. Is there a way to determine the
2 date the report was actually run?

3 A. I don't know. But I think it was
4 run on that date.

5 Q. All right. So you believe that at
6 least it was run for the purposes of producing
7 a PDF file to produce to us?

8 A. That's my belief. But -- that's
9 my belief, yes. But I'm just giving you the
10 best answer I can.

11 Q. Right. But it could have been run
12 any time before that date, original?

13 A. Well, not any time. Approximate
14 of that, yes. I understood that I needed to
15 write a report. And we were -- what was -- the
16 report was about this simulation. And the
17 simulation was run proximally doing the report.
18 I would have done the report at the time we
19 were finishing the simulation, yes. But it's
20 proximal to that. It takes a while to write a
21 report though, so you know, it could have been
22 a week before.

23 Q. Right. So the report is dated

1 May 8, the same day as this. And you would
2 have needed this prior to preparing your
3 report, I believe is what you just said, in
4 order to prepare the report?

5 A. Right. So I had some working copy
6 printouts we would have used. And then we
7 would have tried to run and save and get
8 everything compiled to go with this for whoever
9 wanted it.

10 Q. Now, you verified that others
11 could not have used the original HVE data used
12 by -- in order to reproduce your simulation or
13 to test your simulation?

14 A. I didn't hear a word you said -- I
15 missed a couple of your words, please, if you
16 could help me.

17 Q. All right. Sorry. Can you hear
18 me now?

19 A. I can hear you. Just a couple of
20 them were garbled.

21 Q. Okay. I believe what you
22 testified to is that in order for someone to
23 attempt to simulate your original simulation or

1 to test it, they would have had to have ignored
2 the HVE data that you produced originally and
3 have relied solely upon your deposition
4 testimony and disregarded the actual HVE data
5 in order to try to reproduce your original
6 simulation. Is that fair?

7 MS. CANNELLA: Object to the form
8 of the question. Misstates his testimony.

9 Q. Well, you can correct me if it's
10 wrong.

11 A. I didn't feel like that was fair.
12 No, sir. I...

13 Q. Well, what's the answer to the
14 question?

15 A. You asked me was it fair.

16 Q. No. No. I didn't ask you -- I
17 asked you to answer the question if you can.

18 MS. CANNELLA: The question was,
19 is that fair, I think is what Mr. Buchner's
20 saying.

21 Q. Is that a fair characterization of
22 your testimony?

23 A. What?

1 Q. I'll re-ask it.

2 A. Yeah.

3 Q. So we've already agreed that
4 another expert could not use your HVE data that
5 you produced to re-create or test your original
6 simulation?

7 A. No, we have not.

8 Q. Okay. But then you alluded to,
9 well, they could have read my deposition and
10 ignored the HVE data and just listened to what
11 I said in the deposition and they could have
12 reproduced it or tested it that way?

13 A. I'm sorry, sir. The answer to the
14 previous question was no, we have not agreed to
15 that. You could --

16 Q. Okay.

17 A. Yeah. You could do a reasonable
18 rerun of the data we gave and understand you're
19 going to get a very similar answer to what we
20 got. But they're not going to be as accurate
21 as they need to be so that what's in my report
22 would be precisely produced. But you could get
23 a very similar answer. If you wanted to do it

1 as precise as I would like to have it done, you
2 would want to read the deposition and use what
3 I said in the deposition, yes.

4 We'd like to be accurate. We'd like to have
5 the right amount of detail. But someone could
6 put in the data we have and they would -- they
7 would get a reasonable result of what we got.
8 It just wouldn't be the same results that were
9 in my FR26 report. But they would be close.
10 So as I said earlier, to do what we did, anyone
11 else who wanted to do it would have to -- to
12 get it as accurate as we would like for it to
13 be, not just accurate enough to understand the
14 work, but accurate so that my FR26 report in my
15 deposition was accurate, you'd need to use --
16 use what I said I did in my deposition and the
17 supporting data.

18 Q. All right. And you would need the
19 supporting data that you produced with your
20 FR26 amended report --

21 A. No.

22 Q. -- to get it as accurately as you
23 wanted to do it?

1 A. No. The -- all of the data was
2 already in my deposition and in my files.
3 There really isn't anything -- I did exactly
4 what I said in the -- in the amended, I did
5 what I said I had done or would do in my
6 deposition to run a simulation. So we followed
7 what I said in my deposition as -- as the way,
8 you know, that we wanted to do the work. And
9 then we followed that script to produce this.

10 We did make -- as I already said, there was
11 a 0.04 inches or something tire diameter
12 discrepancy or maybe 0.45 inches that we did
13 correct.

14 Q. Well, we'll talk about your
15 changes to -- in your amended simulation in a
16 minute. With regard to your original HVE
17 simulation, what version of the HVE software
18 did you use? Do you know?

19 A. Yeah. 17, I believe. Let me look
20 and see. I don't -- I don't have the original
21 report. Let me see if I can find that. Yeah.
22 17 on both of them.

23 Q. And when you say both of them, you

1 mean the rerun report, which is reflected in
2 your -- the May 8 printout of 2024?

3 A. Right.

4 Q. Okay. You don't know when that
5 was run, but you know it was -- it was run
6 using the 17.00 version of the software?

7 A. Right. Because it says that at
8 the top.

9 Q. Right. And it says 2021. Is that
10 the year that that version came out?

11 A. Yes.

12 Q. Okay. And do you know whether
13 there's been any updates or new versions to the
14 HVE software since?

15 A. Yes. Yeah. There was -- there
16 have been updates. We actually have a more
17 current version. We're trying to stick with
18 the version when we started working on the file
19 that we had opened. So we -- it can be rerun
20 on a new version if somebody wants to.

21 Q. All right. So you actually
22 possess a more current version than version
23 17.00?

1 A. Yes. Our --

2 Q. What is the -- sorry.

3 A. We -- we get subscription updates
4 from HVE, yes. We have a more current version.

5 Q. What's the most current version
6 that you have now? Do you know?

7 A. I don't know the number on it.
8 No, sir.

9 Q. All right. When you ran the
10 original simulation, do you know the date that
11 it was run?

12 A. On or about October 12, a little
13 bit before.

14 Q. Of 2023. Correct?

15 A. Yes.

16 Q. And do you know whether at that
17 time the most current version of HVE was
18 version 17.00?

19 A. It was not. We had started on
20 version 17. We -- we got an update. As I went
21 back and figured out through this process, we
22 had a more current version. But we had started
23 the process with 17, and we -- we kept it on 17

1 just for consistency. But yeah, we did have a
2 more current version at the time. I think I
3 misspoke in my depo on that.

4 Q. You misspoke in your prior
5 deposition about that. Is that what you said?

6 A. Yes.

7 Q. All right. And so when you say
8 you started the process, what do you mean by
9 that?

10 A. Well, it takes a while to do a
11 simulation. So whatever -- when we -- when
12 the -- when the work was started, 17 was open.
13 Whether -- why it was open, I don't know. But
14 that was the one that we started the process
15 with. And once we start a version, we tend to
16 stay with that version. And that's what
17 happened here.

18 It doesn't mean that there weren't more
19 available versions. But that one -- that was
20 the one that was used. And so we just stayed
21 consistent with it. So we're consistent with
22 it to this day.

23 Q. Why would you not run the rerun on

1 the most current version of the software that
2 you possess?

3 A. Probably because we were trying to
4 reproduce the prior work. And that was the
5 version we -- we had up and were using. If
6 someone wants to do it on a later version, I'm
7 happy to go do it. But I don't -- it's not
8 going to change any of the answers -- any of
9 the opinions because there haven't been any --
10 but that was -- we were just trying to be
11 consistent.

12 We always try to be consistent when we start
13 a project because when you adjust the versions,
14 some program may adjust some of your data. And
15 that can cause some issues. So it's just an
16 engineering habit we have, and we stayed with
17 it.

18 Q. Wouldn't the most current version
19 of the software have included improvements in
20 the software that would give you the most
21 reliable result?

22 A. Well, that's wishful thinking. We
23 don't know. It's not -- not necessarily known.

1 If the program wasn't good enough in version
2 17, they would have let us know that version
3 17, don't use it. But -- and you don't even
4 know -- it's got so many manuals, you don't
5 know what the changes were. I'm don't -- I'm
6 not -- I can't agree with that as we sit here.
7 No, sir.

8 Q. Well, do you -- when you say --
9 when did the process start prior to October of
10 2023? You say it takes a long time. How long?
11 How long were you working on this before you
12 created the simulation -- the original
13 simulation?

14 A. I don't know. I don't know. And
15 I don't know that version 17 was the most
16 updated one when we started. But once we
17 start, we stay with it.

18 Q. Well, you said you had to start
19 the rerun from scratch basically because the
20 old data was not the correct data. Right?

21 A. Right. We -- right. We basically
22 had to reenter it. Yes, sir.

23 Q. All right. And you didn't start

1 that rerun process for, you said months after
2 your deposition?

3 A. Yes.

4 Q. All right. So your deposition was
5 at the end of January. So you have February
6 and March. As best you can recall, you haven't
7 discovered the problem with the original
8 simulation. And then sometime after those two
9 months between then and May 8, you run the
10 rerun. Correct?

11 A. Similar, yes, sir.

12 Q. And you run it from scratch?

13 A. Yes.

14 Q. All right. So that's a month to
15 six weeks worth of time to run a simulation
16 from scratch. Correct?

17 A. I can't agree on the dates. I've
18 already told you that. But yeah, there was
19 time to run it from scratch.

20 Q. All right. And are you aware that
21 between August of 2021 when version 17 came out
22 and February of 2023, which was seven months
23 prior to your original simulation, there had

1 been -- three new versions of HVE had come out?

2 A. I don't know the number. No, sir.

3 Q. All right. You can't dispute that
4 though?

5 A. I'm not trying to dispute it. No,
6 sir.

7 Q. All right. And since February of
8 2023 up until the time of your running of the
9 rerun, there is an additional version of HVE
10 that's come out. Were you aware of that?

11 A. Well, I know we have -- I know
12 there -- I know there is a version that we
13 could have used as the new version, yes. I
14 don't know the dates of all the versions. No,
15 sir.

16 Q. All right. When you start a case
17 from scratch now that you want to use HVE,
18 which -- which version do you use?

19 A. 17.

20 Q. So you're still using 17 for all
21 your cases even though you possess a more
22 current version of HVE?

23 A. No. If we opened a case today, we

1 would be using the latest version because we --
2 we have the latest version.

3 Q. Well, that was my question. That
4 was exactly my question. If you opened a
5 case -- a new case today, what version of HVE
6 would you use?

7 A. Well, we'd probably use whatever
8 version was opening at that time on that
9 computer. I would anticipate we would use the
10 latest version, just like I said in my
11 deposition.

12 Q. All right.

13 A. But if -- if the file was already
14 functioning, we would -- you know, we'd make a
15 decision based on the situation of the file.
16 But I was -- I was trying to stay with what we
17 had originally done to be as consistent as
18 possible with what we had originally done. I
19 understand you want to argue there's a
20 different idea.

21 I don't have any problem with it. Somebody
22 can take our data and rerun it on version --
23 whatever they want. 12 if they want.

1 Q. All right.

2 MR. HILL: We've been going a
3 little over an hour. Want to take a -- I need
4 a restroom break. And please let me know if
5 you need a break obviously.

6 THE WITNESS: Yeah.

7 MR. HILL: This would be a good
8 time.

9 THE VIDEOGRAPHER: The time -- the
10 time is 11:13 a.m. We're off the video record.

11 (A break was taken.)

12 THE VIDEOGRAPHER: The time is
13 11:28 a.m. We're back on the video record.

14 MR. HILL: Thanks.

15 Q. (Mr. Hill) Hold on. I'm having an
16 issue sharing my screen.

17 A. I can see your screen. Yes, sir.

18 Q. Okay. Great. All right. Up on
19 the screen is that FR26 amended report. And I
20 want to move now to the sections where you
21 discuss the comparison between the initial
22 simulation and the rerun simulation. And as I
23 understand your report, with the rerun you

1 were -- you used for the F-250, the default
2 properties for -- for stiffness coefficients
3 that were within the software, the
4 Vehiclemetrics database. Is that correct?

5 A. Yes.

6 Q. And is the Vehiclemetrics database
7 part of the HVE software?

8 A. No. Vehiclemetrics is an approved
9 vendor to do things like make vehicles for the
10 HVE software.

11 Q. How is the different from the
12 Neptune data that you used with the original
13 simulation?

14 A. You mean for crush stiffness?

15 Q. No. I don't mean the actual. How
16 is using Vehiclemetrics -- in other words, you
17 just said it was approved by HVE for use as a
18 method for determining the stiffness
19 coefficients. Is -- is Neptune not approved?
20 I'm trying to understand that. I thought
21 Vehiclemetrics was contained within the HVE
22 software.

23 A. Okay. HVE has vehicles that come

1 in it.

2 Q. Right.

3 A. HVE had an F-250, but it was not
4 the Crew Cab. It was an Extended Cab, I
5 believe. So it's essentially the same vehicle,
6 but a little bit -- the weight is going to be a
7 little bit different. The length will be a
8 little bit different. And we wanted a
9 Crew Cab.

10 So Vehiclemetrics is a vendor for HVE that
11 we contracted with to make us the right shape
12 Crew Cab from our scans. We gave them the
13 scan, and they made the right shape Crew Cab.
14 And -- and with that vehicle from them came
15 crush stiffness coefficients.

16 Their crush stiffness coefficients were
17 higher than Neptune's. I think Neptune's were
18 reasonable. Vehiclemetrics, because they
19 provided some -- I didn't realize they had --
20 that's closer to using the defaults of HVE than
21 Neptune. So I -- in the update we used them.
22 And to be clear, they're higher crush stiffness
23 coefficients. So the F-250 in the rerun was

1 stronger and stiffer.

2 So you know, that would be to the Escape's
3 disadvantage. We hit it the a stronger truck
4 in the rerun -- I mean a stronger simulated
5 truck.

6 So that's -- that's -- I thought that would
7 be most consistent with my deposition and the
8 most consistent with my intent, especially
9 because we had done the calculations of crush
10 originally with the hand calculations or the
11 computer calculations with -- with Neptune's
12 data. Now we were going to use the pure
13 simulation data or as pure as we could get.

14 Q. And why didn't you follow that
15 same process with the original simulation?

16 A. Because I asked if we had crush
17 stiffness coefficients for the Crew Cab. And
18 the answer was no. And I didn't realize when
19 Vehiclemetrics provided a vehicle, they -- they
20 provided stiffness coefficients as well, the
21 numbers side.

22 So in the rerun when we were making sure to
23 do things per my deposition, we went through it

1 and said, okay, I would use defaults if they
2 were there. This vehicle has defaults. We're
3 going to use those because that's what I said
4 we would do.

5 Q. So were you told by Jacob or
6 whoever was running the test the first time
7 that there was -- there were no default values
8 for an F-250 in the HVE system?

9 A. To an extent, yes. I asked for
10 the Crew Cab, and he said no. So I didn't
11 think there were. I didn't ask for Vehicle --
12 Vehiclemetrics to ultimately provide it. I
13 asked the question -- I think I got the
14 question -- the correct answer to my question.
15 I think I just misunderstood that it applied --
16 that it only applied to -- the HVE has we
17 opened it, it didn't have them.

18 I don't think that I asked the question did
19 it come with Vehiclemetrics. So just a
20 communication error.

21 Q. All right. So back when you ran
22 the original simulation, you could have
23 followed the process that you followed with the

1 rerun? There's nothing new about that. It's
2 just you didn't recognize that that was a
3 possibility when you did the original run?

4 A. Right. Right.

5 Q. Vehiclemetrics and the process you
6 followed was available back in October of 2023?

7 A. Yes. Yes. And we had it. We had
8 the vehicle. We had it in there. We just
9 didn't use the AV values that came with the
10 truck because I mistakenly didn't think they'd
11 come with some.

12 Q. All right. It appears another
13 change that was made is to the tire sizes on
14 the F-250. Explain the change you made between
15 the original run and the amended run with
16 regard to the tire sizes on the F-250.

17 A. Sure. We have the tire sizes
18 right in the file as a whole. But when we ran
19 the simulation, the tire size -- I don't see
20 the paragraph in there. Can you -- do you have
21 it?

22 Q. It's --

23 A. Oh, yeah. Yeah. So there was a

1 point -- a 0.35 inches difference in the tire
2 size that -- 0.7 in the diameter and 0.35
3 inches in the -- in the radius. So we were off
4 by, you know, a third of an inch in height.
5 And I think that was corrected. In fact, I
6 know it was corrected.

7 Q. And that's not based on any new
8 information. Right? I mean, the tire size on
9 the subject F-250 was known at the time you ran
10 your original simulation?

11 A. Right. We -- we had done it -- we
12 used the right tire size throughout most of the
13 file, but just in inputting the data in the
14 simulation, it didn't -- we didn't catch that
15 we should change the size of the tire by
16 that -- you know, by that much.

17 Q. If you don't know what original
18 data was used for the original simulation
19 because you don't have it anymore, how do --
20 how do you know what was or wasn't used with
21 the original simulation?

22 A. Well, I don't remember where it
23 is. But Mr. Grimes is the one that located it

1 and pointed it out. So it was in the data that
2 we provided. I don't know where it is in
3 the -- in the data as we sit here. My memory
4 doesn't go back that far. But the -- so it's
5 in the data we provided, whether it's in one of
6 the reports or printouts.

7 Q. But we've -- we've already
8 established that the data you provided, you
9 can't verify whether it correlates to your
10 simulation -- original simulation or not.

11 A. You could be right on that. The
12 one that -- the one that I wrote the report on
13 may have actually had the right size in it.
14 But in the -- in what we provided, it looked
15 wrong. So we made sure it was right in the
16 rerun.

17 Whether or not the data we provided was
18 actually about the simulation that I used to
19 right the report or not, well, that's a great
20 point you made. But whatever data we had
21 available, it looked like the tire size was
22 wrong. So we made sure we got the tire size
23 right in the rerun because that was our whole

1 intent. We just wanted to get it right.

2 Q. Hold on one second. Just real
3 quickly while we're talking about HVE data
4 reports, have you seen a screen like what's up
5 there now from HVE?

6 A. I -- I can't read it. It's small.

7 Q. All right. This is a graphical
8 representation of crush from an HVE run. Have
9 you --

10 A. No. We -- we only see a list of
11 files. At least I only see a list of files.

12 Q. So you've never seen a
13 depiction --

14 MS. CANNELLA: Rick, we see your
15 e-mail, I think.

16 MR. HILL: You see my e-mail?

17 MS. CANNELLA: Yeah.

18 MR. HILL: I think I shared the
19 wrong screen.

20 MS. CANNELLA: Yeah.

21 A. I couldn't read it, so there's,
22 you know, no harm no foul.

23 Q. There's nothing in there important

1 anyways. All right. How about now?

2 A. Yes.

3 Q. All right. So have you seen this
4 type of output from an HVE simulation?

5 A. I don't know if I've seen it
6 exactly like that. But I've seen something
7 similar.

8 Q. All right. And did you create
9 anything like this based upon your rerun
10 simulation?

11 A. No. Yeah, we have the image of
12 the vehicle. And we also have the crush. But
13 it's not compiled like that, no. But we
14 have -- we have the same information in --
15 in -- compartmentalized though.

16 MS. CANNELLA: One moment. What
17 are we looking at right now? Is this from our
18 wreck?

19 MR. HILL: No. This is a
20 representative of -- of an HVE output, a form
21 of HVE showing the data from a simulation. So
22 I'm just asking him generically has he seen
23 something like this for any of the simulations

1 he's run.

2 MS. CANNELLA: This is -- we
3 haven't produced this. No simulation has been
4 produced to us of our wreck. This is our Ford
5 Escape with a similar crush profile. So why
6 haven't we seen this before?

7 MR. HILL: This is just a sample.
8 This is not -- this is a sample HVE output from
9 just a random run. I'm just asking if he's
10 seen this type of presentation. That's it.

11 MS. CANNELLA: But this is -- no,
12 this is -- this is our crash. This is our
13 crash right here.

14 MR. HILL: Right. This is just a
15 sample. This is not our crash. I can
16 represent that to you. It's not our crash.
17 It's nothing -- it is nothing. It's just a
18 sample. I'm just saying if he's ever had a
19 representation or seen this type of
20 information. Because if you look at --

21 MS. CANNELLA: Has somebody done a
22 simulation of our crash --

23 MR. HILL: No.

1 MS. CANNELLA: -- for Defense?

2 MR. HILL: No. That's just a
3 random simulation showing a type of data. And
4 certainly if I want to just get a sample of
5 what HVE outputs are like, I can do that.
6 That's all that is. It's a representation
7 sample of the type of data HVE can put out.

8 MS. CANNELLA: Okay. Well, we
9 want to get whatever communication that came
10 from and whatever file that came from as well.

11 MR. HILL: Sure. All right.

12 Q. (Mr. Hill) You produced what's on
13 the screen now as 9376. It's a graphical
14 representation of the crush on the Escape in
15 your rerun simulation. Is that what's depicted
16 on 9376?

17 A. That's part of it, yes.

18 Q. Okay. And was that generated by
19 HVE or was that generated by you using the HVE
20 data?

21 A. That's HVE.

22 Q. Okay. So HVE creates this --

23 A. Yes.

1 Q. -- from the simulation?

2 A. Yes.

3 Q. Okay. And are you aware of
4 whether it can create any other graphical
5 depictions of crush from a simulation?

6 A. Well, you can rotate it and look
7 at it in different ways, yes. That was -- we
8 wanted a representative one. If somebody wants
9 more, I guess they can rerun it and do it. But
10 this is -- we wanted an output so you could see
11 what the car looked like. And the best way to
12 do it is this.

13 Q. Right. All right. Do you choose
14 like what, like, HVE is going to -- what side
15 it's going to show or how it's going to display
16 this? I mean, is there other options? How
17 does it work?

18 A. I think you can rotate it and
19 choose the image you want, yes. So this is --
20 this is -- I like a perspective, a 3D
21 perspective so you can see it. It's
22 representative of the numbers that are in the
23 reports above this. So this is the one that I

1 chose, yes.

2 Q. Right. All right. The documents
3 in appendix B, do they contain all of the HVE
4 files that were generated when you ran the
5 rerun simulation?

6 A. They were -- they're the reports
7 that HVE provided for the rerun simulation.
8 The file is a -- this is a PDF. The file is an
9 electronic copy of the file that was provided
10 with the report.

11 Q. Right. So this is a printout of
12 the PDF of the results from the test, the
13 reports?

14 A. Yes.

15 Q. And you have the electronic files
16 used to generate this -- these reports?

17 A. Yes. It was provided with the
18 report.

19 Q. Okay. All right. Going back to
20 the vehicles used in the simulation, you talk
21 about the F-250 that was in the volume
22 metrics -- the Vehiclemetrics database was a
23 regular cab body style. Our subject truck was

1 a Crew Cab. And so you used a modeling partner
2 to convert to a Crew Cab. Is that a
3 layperson's way to describe that?

4 A. Yes. The modeling partner we used
5 was Vehiclemetrics. It's a typo and it says
6 Baker Sneddon. That was -- that was -- it was
7 Vehiclemetrics. Everything came from
8 Vehiclemetrics in the first part of this
9 section. I don't know why it was typed
10 Baker Sneddon. That's a mistake.

11 Q. That was my question. I didn't
12 understand what that -- so that sentence
13 shouldn't be in this?

14 A. The sentence should be. But the
15 modeling partner should be Vehiclemetrics.

16 Q. All right. Gotcha. And when you
17 did the original simulation, was there a
18 transfer from -- I mean, how did you account
19 for it being a Crew Cab in the actual accident?

20 A. Well, the original we used
21 Vehiclemetrics. We had them do exactly what
22 was said here. Regular cab geometry was
23 replaced with a scan-based Crew Cab geometry.

1 So we've had that since, you know, October of
2 last year, and that's what we used.

3 Q. I'm saying you used the Neptune
4 data in the original simulation. So was it for
5 a Crew Cab or a cab body style?

6 A. I'd have to look and see. I
7 didn't understand that that's what you were
8 asking about. We have that in the
9 calculations. We have the printout right here
10 if I can take a minute to find it.

11 All right. It's a Super Crew four-door. So
12 we had a Crew -- the Neptune data that was
13 used in our crush calculations -- because we've
14 done two things, crush calculations and a crush
15 simulation. The crush calculations were a
16 Super Duty Crew. And the original one was the
17 Super Duty Crew with Neptune.

18 Q. Okay. And we have a Super Duty
19 Crew in the accident?

20 A. Yes.

21 Q. Yeah. Okay. All right. On this
22 page I have up here, you're talking about the
23 bumper height that you used for the F-250 in

1 the rerun simulation. And I believe you agree
2 that it was 29 inches and that that was
3 verified through measuring both the exemplar
4 truck that you had and the measurement of the
5 crash test F-250 used in the Defense crash
6 testing and that they were all consistent. Is
7 that correct?

8 A. Reasonably. They're never
9 perfect. But yeah, they're all approximately
10 29 inches.

11 Q. Okay. So you don't have any issue
12 with the height of the crash test F-250 as
13 tested?

14 A. No.

15 Q. Okay. The vehicle you used in the
16 rerun simulation for the Escape, it doesn't
17 appear like you made any changes to that in
18 comparison to your original run. Is that
19 correct?

20 A. Correct.

21 Q. Okay. And so the only
22 modifications we have to either vehicle are
23 what we've already talked about for the F-250.

1 You used a different default coefficient
2 stiffness because you used the Vehiclemetrics
3 instead of Neptune. Right?

4 A. Yes.

5 Q. You changed the tire sizes to
6 mirror the subject F-250. For the Escape you
7 didn't make any changes compared to the
8 original run?

9 A. Correct.

10 Q. All right. And so the only real
11 modifications beyond those would be to the
12 weight of the vehicle. Right?

13 A. Seemingly.

14 Q. Right. And so here we have
15 appendix A, which I believe is your -- showing
16 how you determined the weight used in the
17 simulation for both vehicles?

18 A. Yes.

19 Q. Okay. Here is the F-250 first.
20 And the first weight I see here, weight 250
21 equals 8,040 pounds. I'm assuming that is the
22 weight of the crash vehicle that you weighed
23 after the crash?

1 A. Yes.

2 Q. Okay. And then you added weight
3 for the driver and certain items that were on
4 the F-250?

5 A. Yes.

6 Q. Okay. And that gave you a total
7 weight that's highlighted here that was used
8 for the total weight in the simulation?

9 A. Yes.

10 Q. Okay. Does HVE allow you to
11 account for the position of these additional
12 weights? In other words, does it -- do you put
13 in the location of the driver and add 170
14 pounds in the driver's seat or is it just a
15 total weight that's input into the software?

16 A. You can do it either way.

17 Q. Okay. So it does allow you to
18 actually position weight within the vehicle in
19 a specific location?

20 A. Well, generally the way we do it
21 is we would redistribute the weight ratios. So
22 I believe in the past we've actually put actual
23 weights in like occupants and things. But we

1 normally just redistribute the weight ratios,
2 if we do it at all.

3 Q. Okay. In this case did you
4 redistribute the weight ratios?

5 A. No, we did not. We just added the
6 weights to the vehicle at the CG.

7 Q. All right. So there was no
8 factoring in the specific location of the items
9 in the truck; it was -- you didn't use that as
10 part of your rerun simulation?

11 A. Correct.

12 Q. Okay. Did you account for any
13 loss of fluids that the F-250 may have suffered
14 in the crash?

15 A. No.

16 Q. Okay. Do you know the level of
17 fuel in the gas tank of the F-250 at the time
18 it was measured?

19 A. Not specifically. Just what was
20 in there. It's part of the 8,040. We know the
21 weight of it. But you know, not an exact
22 amount.

23 Q. You don't know if the tank was

1 full, empty? You don't know what fuel level
2 was in the tank at the time it was weighed?

3 A. Just what it was after the
4 accident. There's no evidence it leaked out.

5 Q. And the same with regard to
6 whatever fluid was in the radiator, that wasn't
7 accounted for?

8 A. Yeah, the radiator did leak some
9 out. We know that. But no, we did not think
10 that was --

11 Q. (Inaudible) fluids contained
12 within the vehicle?

13 A. Pardon?

14 Q. And you didn't account for any
15 other loss of fluids from the vehicle?

16 A. No. We knew some radiator fluid
17 had leaked out. We weren't worried about that.
18 The rest of the fluid should have been the same
19 at the time of the accident.

20 Q. All right. And the weight for the
21 chainsaw, did you actually measure the
22 chainsaw? Did you weigh it?

23 A. No. We didn't have the chainsaw.

1 So you had to look something up. It's an Stihl
2 chainsaw, so you had to look something up for
3 the original.

4 Q. Same -- same question for the
5 tools. Is that based upon measuring the weight
6 of the tools, or is that just an estimation?

7 A. Nobody knows what was in the
8 toolbox. We needed a weight to put in. So we
9 thought 100 would be reasonable. We don't know
10 exactly what it is. Nobody has ever seen
11 inside the toolbox.

12 Q. And what about the storage box, is
13 that an estimation or is that -- you didn't
14 actually weigh the storage box, did you?

15 A. No. It was missing. So I think
16 we did some internet research to come up with a
17 reasonable weight, just like Mr. Grimes did.

18 Q. All right. The bottom of the page
19 is the weight you used for the Ford Escape. In
20 your simulation, again I'm assuming that your
21 weight 3,410 is the measured weight of the
22 vehicle after the crash?

23 A. Yes, it is.

1 Q. All right. And with the Escape,
2 did you add any weight for the cargo that was
3 behind the second row seat?

4 A. Well, it was already in the
5 vehicle when we weighed it, so --

6 Q. All right. That --

7 A. -- yes, it's in the weight.

8 Q. That's my question. So there
9 was -- the cargo was still in the back of the
10 Ford Escape at the time you weighed it?

11 A. Yes.

12 Q. Okay. Do you know the level of
13 the fuel tank in the Escape at the time you
14 weighed it?

15 A. Well, nothing leaked out at the
16 scene. So it was whatever it was at the time
17 of the accident. That's all we were concerned
18 about.

19 MS. CANNELLA: Mr. Hill, I'm
20 trying to give you some leeway here, but this
21 is not new information. And this is a
22 deposition on his supplemental report. So
23 we're not -- we're going to object to a bunch

1 of questions about work that -- that could have
2 been discussed at his first deposition.

3 MR. HILL: That's fine. You can
4 lodge that -- lodge that objection. But this
5 was produced as part of his amended report.

6 MS. CANNELLA: I understand that.
7 But my -- my statement stands.

8 MR. HILL: All right. Well, I
9 disagree with your objection.

10 Q. (Mr. Hill) The Escape in the
11 accident suffered quite a bit of broken glass.
12 You would agree with that?

13 A. Yes.

14 Q. All right. Did you account for
15 the weight of the glass that was missing when
16 you weighed the crashed Escape?

17 A. Whatever glass -- normally it's
18 all shoveled up and thrown in the vehicle or it
19 falls in the vehicle. Whatever glass was in
20 there, it got accounted for. Whatever glass
21 wasn't in there didn't get accounted for.

22 Q. Okay. And do you know whether the
23 glass was actually -- the shards of glass was

1 put in the vehicle at the time you weighed it?

2 A. Well, some of it was. But I
3 don't -- I didn't account -- try and account
4 for each shard of glass. No, sir. It's -- the
5 weight of the vehicle is a reasonable
6 approximation in the condition it's shown in at
7 the time of our photographs. And we think
8 that's reasonable for the accident, plus the
9 occupants the car seats.

10 Q. And the same question with regard
11 to the placement of the weight. Just to be
12 clear, similar to the F-250 you didn't account
13 for the location of the occupants in the
14 vehicle when you ran the simulation?

15 A. Well, they're near the CG. But
16 no, we didn't. We just added their weight to
17 the total vehicle, yes.

18 Q. Okay. All right. Now we can --
19 let's just confirm a few things that were not
20 changed between the original simulation and the
21 amended simulation.

22 Just to be clear, the offset that you used
23 in both simulations was twelve inches. Is that

1 correct?

2 A. Yes.

3 Q. All right. And the speed --

4 A. Time out. Pardon me. Pardon me.

5 Q. Sure.

6 A. You've actually made a really good
7 point. And you did it a little while ago.
8 I -- we know the offset is eleven inches
9 from -- or approximately a foot. That's what I
10 said in my first depo. But it's eleven from
11 the Ford emblem marks on the tailgate.

12 So in the original simulation, I don't
13 know -- I believe it was -- I don't know if it
14 was eleven inches or one foot. But in my depo
15 I was asked what the offset was. I said, well,
16 I haven't exactly measured it. And I made a
17 measurement on a drawing, and it said one foot.
18 So I'm going to use one foot because that's
19 consistent with my deposition. But the
20 precise -- you made a good point earlier. I
21 don't know the precise offset that was used
22 other than from my memory it could have been
23 eleven inches or a foot.

1 But it was -- it was -- it was done from the
2 scan data we had and everything. And so it's
3 approximately a foot. And that's what we used.
4 I don't know why I thought I needed to clarify
5 all of that. But thank you for listening.

6 Q. Sure. But regardless, the offset
7 you used in the rerun was twelve inches to the
8 left of the Escape?

9 A. Thank you. Yes.

10 Q. Right. And -- and there's no
11 dispute that that's the offset that you believe
12 occurred, in fact?

13 A. Well, I actually think it's eleven
14 from the -- in the depo I did an approximate
15 using a -- a manual scale. But we know where
16 the -- we know it's precisely eleven if we go
17 to the best data we have.

18 Q. All right. So why did you use
19 twelve if you now have determined that it was
20 eleven?

21 A. Because I -- earlier we were using
22 the orientation from the scans, which was
23 eleven. But in the depo I said one foot, so we

1 used a foot because I -- I wanted to do it
2 exactly from my depo. And that's a -- that's
3 an advantage to the F-250. That would produce
4 more crush.

5 So it keeps my analysis conservative, which
6 is fine. And I'm not worried about an inch
7 left or right, up or down.

8 Q. All right. And you used a speed
9 of 51 miles per hour for the F-250?

10 A. Yes.

11 Q. And you have said repeatedly
12 throughout your initial deposition and then now
13 in this report that the speed of the F-250 at
14 the time of the accident was 51 miles per hour.
15 Correct?

16 A. That's my best number. Yes, sir.

17 Q. All right. I know it hasn't been
18 a full hour, but I need another break. So
19 let's just take a five-minute break. What do
20 you want to do about lunch, Mr. Buchner? I
21 don't want to make you work through lunch, but
22 it's up to you.

23 A. I'll cry when I need lunch. Right

1 now I don't need lunch.

2 Q. All right.

3 MR. HILL: Well, let's just take a
4 quick five-minute break.

5 THE WITNESS: Thank you.

6 MS. CANNELLA: Okay.

7 THE VIDEOGRAPHER: The time -- the
8 time is 12 o'clock p.m. We're off the video
9 record.

10 (A break was taken.)

11 THE VIDEOGRAPHER: The time is
12 12:15 p.m. We're back on the video record.

13 MR. HILL: Thanks.

14 Q. (Mr. Hill) The HVE parameters for
15 the Escape that you used in the rerun
16 simulation, they don't differentiate with
17 regard to whether the Escape has a sunroof or
18 doesn't have a sunroof. Correct?

19 A. What are you asking?

20 Q. Yeah. So you used a vehicle in
21 your simulation for the Escape that you got
22 from the Volume Metric's (sic) database.
23 Correct?

1 A. Well, from Engineering Dynamics.

2 It was in their database originally, yes.

3 Q. Right. In HVE's database?

4 A. Yes.

5 Q. And did that vehicle have a
6 sunroof that you used in your simulation?

7 A. It doesn't show a sunroof.

8 Q. Okay. And it doesn't
9 differentiate. You can't choose Escape with a
10 sunroof or Escape without a sunroof within the
11 HVE software?

12 A. HVE doesn't have a choice for with
13 or without sunroof. No.

14 Q. Okay. And so it doesn't consider
15 whether it has a sunroof or not in determining
16 its prediction of crush?

17 A. That would be up to the user to
18 consider whether or not, you know, that should
19 be included more than likely. But where the
20 crush is in the simulation we ran is the bumper
21 level. So as long as you go to bumper level
22 crush, I would say the sunroof would be not a
23 particular factor that the simulation could or

1 could not include. But it doesn't mean that if
2 you were to -- in other words, say Mr. Grimes's
3 crash test, you would want to use the most
4 representative vehicle. In the HVE we use the
5 most representative vehicle. And sunroofs --
6 I've never investigated presence or
7 non-presence on other vehicles.

8 But yeah, as far as HVE goes, it doesn't --
9 to my knowledge, it's not including sunroofs in
10 its -- in what it has.

11 Q. And you did not modify the Escape
12 vehicle in your simulation to account for the
13 sunroof?

14 A. No. We were not modifying it, no.
15 We were attempting to use it, you know, as --
16 as their default vehicle. That is correct.

17 Q. Okay. And the simulation also
18 does not allow you to place cargo within the
19 hatch of the Escape to determine whether that
20 will have any impact on the crush. Correct?

21 A. We don't think it has any impact.
22 No, sir. But if -- we don't think it did. The
23 intent wasn't to put it in there. But what it

1 clearly shows is that the structure of the
2 vehicle itself would have produced less crush
3 if it were hit at the bumper level, which was
4 the intent of the run.

5 Q. Right. I'm just trying to
6 establish that in your simulation, you didn't
7 place any cargo in the back of the Escape used
8 in the simulation?

9 A. No, we did not.

10 Q. All right. Likewise you didn't
11 place a car seat in the Escape in the
12 simulation?

13 A. No. We were studying how the
14 Escape performed relative to a bumper level
15 contact. We wanted to study the structure of
16 the Escape.

17 Q. You're aware obviously that the
18 Defense performed a real-world crash test back
19 in May of 2023, and the crush that is seen on
20 the Escape in the real-world crash test is very
21 different from the crush seen in your rerun
22 simulation. You would agree with that?

23 A. No. Both produced what we -- what

1 is the critical factor in this case is that
2 they both produced -- demonstrated that
3 bumper-level impacts produce less crush than
4 override impacts. So we do have -- that's
5 really the only value of the test is to
6 demonstrate that there would not be any
7 override. That's what we're trying to do with
8 our simulation is that if you can hit the
9 bumper of a vehicle, then you -- then you end
10 up producing a much more favorable result as
11 far as the, you know, increasing forces and
12 able to decrease crush. But there are a lot of
13 differences beyond that that makes the crash
14 test not representative of our accident.

15 Q. Well, that's a separate question.
16 But let me start with this. How do you define
17 override? Let's make sure we understand that.
18 Do you define it as the bumper completely
19 misses the other bumper? Is that your
20 definition?

21 A. I don't have a definition.
22 There's an understanding -- there can be -- the
23 term doesn't have the exact definition in every

1 crash. Every crash is slightly different. But
2 override typically discusses that the -- that
3 some part of one vehicle that's like the bumper
4 is overriding some part of the other vehicle.
5 In this case we're talking about the bumpers or
6 the bumper-level frames.

7 So yeah, that's -- that's what we're using
8 here. But it's -- you know, it needs to be
9 discussed openly, not -- it's not just one
10 definition that can be perfectly applied to
11 everything.

12 Q. Okay. So there's no one
13 definition of override in your opinion?

14 A. Well, there's one understanding of
15 it. But there's no one exact definition. If
16 you're teaching a class, you'd say it's when
17 one bumper goes over the top of another to get
18 the concept across. But we have a lot of
19 different vehicles that hit a lot of different
20 ways. So you have to look at each accident
21 somewhat uniquely.

22 Q. So when you say there was no
23 override in the exponent crash test, what --

1 MS. CANNELLA: Sorry.

2 Mr. Buchner, were you done with your answer?

3 THE WITNESS: I was. Thank you.

4 Q. So when you say that there was no
5 override in the exponent crash testing, what do
6 you mean by that statement?

7 A. Well, the bumper -- the rear
8 bumper of the -- and the structure supporting
9 it specifically because the rear bumper did
10 shift some. But the frame rails of the unibody
11 of the Escape and -- on one side went into the
12 center of the bumper and stayed there
13 throughout the entire crash test. So we had
14 that bumper level was secure and the strong
15 structures were secure on the bumper of the
16 F-250 on the driver's side. And on the
17 passenger side F-250, the tow hook went into
18 the bumper and pushed it in.

19 So we maintained bumper-level, frame-level
20 engagement between the two vehicles throughout
21 the entirety of the crash pulse phase of the
22 accident. And the physical evidence concretely
23 shows that.

1 Q. The measured crush in your
2 simulation is over 20 inches short of the
3 observed crush in the crash test. Would you
4 agree with that?

5 A. Well, are you saying someone
6 measured the crush in the crash test like
7 Mr. Grimes and published that? Because I
8 haven't seen that if he did.

9 Q. No. You overlaid it yourself in
10 comparing the two crushes.

11 A. Well, my intent wasn't to do
12 Grimes's work and provide measurements and
13 things. He didn't measure it. I'm just trying
14 to show that there's less crush visually
15 obviously between the crash test. So his
16 representation of the crash test is inaccurate.

17 Q. What about his representation of
18 the crash test is inaccurate?

19 A. Well, he claims there was more
20 crush. And then he changes that to the same
21 crush in his depo. So that's -- in our report
22 we just showed the two vehicles overlaid so
23 that anyone can make their own determination as

1 to the crush.

2 Q. All right.

3 A. He didn't -- he didn't do that.

4 He said he visually saw it. But he didn't

5 provide any evidence of it. So we just

6 provided visual evidence of it.

7 Q. Well, we have photographs of the

8 crash test vehicles.

9 A. Visual evidence.

10 Q. Right. And have you requested to

11 inspect the crash test vehicles?

12 A. No.

13 Q. Has anyone from Rough Country ever

14 prevented you from inspecting the crash test

15 vehicles?

16 A. I mean, I've never talked to

17 Rough Country, so I don't know.

18 Q. Any lawyer on behalf of

19 Rough Country said that you -- you are not

20 allowed to inspect the crash test vehicles?

21 A. You know every time I've ever

22 talked to a Rough Country lawyer because it's

23 been you. And so --

1 Q. Okay.

2 A. -- you haven't ever talked about
3 it, so no.

4 Q. Have you ever --

5 A. If the crash test is provided and
6 documented, I'm using what was provided and
7 documented. And I think -- and that's --
8 that's all I've used. If someone wants me to
9 inspect the vehicles, I -- I haven't done that.
10 No.

11 Q. Have you ever asked Ms. Cannella
12 for permission to inspect the vehicles?

13 A. I don't know. I don't remember.

14 Q. Okay. And you know from reading
15 Mr. Crosby's deposition that those vehicles
16 have been preserved and are available at the
17 Exponent location in Phoenix. Correct?

18 A. That's what he said.

19 Q. All right. Do you have any reason
20 to dispute that?

21 A. No.

22 Q. Okay. Let's talk about comparing
23 your rerun simulation to the real-world crash

1 test performed by the Defense. And I just want
2 to make sure we're clear on what's the same and
3 what's different among those two. Okay? The
4 height of the F-250 is the same in both the
5 simulation and the crash test. We can agree on
6 that?

7 A. Reasonably, yes, sir.

8 Q. And same with the -- with regard
9 to the Escape. Correct?

10 A. Reasonably, yes, sir.

11 Q. All right. And in both there --
12 in neither the simulation nor the crash test
13 were the -- was cargo placed in the rear of the
14 Escape.

15 A. Right.

16 Q. We can agree on that?

17 A. Correct.

18 Q. Okay. There was no sunroof
19 involved in either your simulation or the crash
20 testing for the Escape?

21 A. Correct. Correct.

22 Q. There was no child seat placed in
23 the rear position where Cohen is in either your

1 simulation or the crash testing?

2 A. Correct.

3 Q. The speed of the crash test was
4 49.9 miles per hour. And the speed you ran
5 your simulation was 51. So we have a slight
6 differentiation there. The crash test was 1.1
7 mile an hour slower than your simulation. Do
8 you agree with that?

9 A. Yes.

10 Q. Okay. And at a slower speed,
11 you're going to have less crush indicated on
12 the Escape the lower the speed with all other
13 variables being equal. Would you agree with
14 that?

15 A. Not in the context of your line of
16 questions, no, because we know that the crash
17 test was -- missed to the left by 45 percent --
18 at 45 percent more offset. So that's an apples
19 and oranges problem. So no, you can't say
20 that.

21 Q. Well, I'm not talking about the
22 offset variable. I'm talking about whatever
23 test you run at any offset.

1 A. Well, then you need to start a new
2 line of questions because basically you're
3 saying let's compare my simulation to a
4 real-world crash test. Well, my simulation
5 compared it to the real-world accident. Your
6 crash test is not the real-world accident.
7 Your crash test -- if I say it that way, I
8 apologize. Exponent's crash test had 45
9 percent more offset, which changes an unknown
10 number of things.

11 Q. Okay. Let's --

12 A. Certainly -- but it certainly
13 will, as a minimum, disadvantage the Escape.

14 Q. Okay. Let's say that there was,
15 in the crash testing, the identical offset as
16 what you simulated. Let's assume that.

17 A. Okay. So we're not talking about
18 the Exponent crash test at all now?

19 Q. Right. We're talking about -- in
20 your opinion we're talking about a hypothetical
21 real-world crash test. Would it be appropriate
22 to run that real-world crash test at 49.9 miles
23 per hour to compare it to your simulation

1 assuming all other variables were the same?

2 MS. CANNELLA: Object to the form
3 of the question. It's confusing.

4 A. Yeah, that's -- that's an
5 engineering problem.

6 Q. Well, what speeds -- go ahead.

7 A. It's using information that we
8 haven't -- that no one has ever done, you know.
9 So you know, normally I'm not worried about a
10 mile per hour. But sometimes I'm very worried
11 about a mile per hour. So that's -- I don't --
12 so that's actually a new analysis that I
13 haven't done before now. So I'm -- I'm not
14 comfortable in doing that. But I'll try to
15 answer your questions.

16 Q. Let me ask it this way. Do you
17 have any criticism of the speed of the impact
18 in the crash test?

19 A. In a sense, I do because he
20 reported that the accident speed of the truck
21 could have been down in the forties. That's
22 part of his opinions. So I was confused as to
23 why he -- why he chose the speed he chose. I

1 know why I chose 51 because I wanted a worst
2 case scenario. But I'm not sure -- if he's
3 trying to work in favor of, you know, proving
4 his opinion, which is why he said he needed the
5 crash test so he could say that, you know,
6 override doesn't -- or not override, but that
7 lift kits don't matter, well, he needs to do a
8 study to show that. So there's a whole lot
9 involved in this line of questions that goes
10 way beyond just what you're saying.

11 Q. Well, if you -- if you're going to
12 compare the real-world crash test to your
13 simulation, you would need to run them at
14 approximately the same a speed to be able to do
15 an apples-to-apples comparison between the two.
16 Correct?

17 A. Generically, yes.

18 Q. Okay. That's all. So let's talk
19 now about the differences between the crash
20 testing done by Exponent and your simulation.
21 You've brought up -- you've brought up the
22 offset.

23 A. Yeah. The primary difference that

1 causes -- first, the simulation is -- is one
2 tool. The crash test is another tool. The
3 primary difference between these two tools that
4 is the most significant is the excessive offset
5 of the crash test. Thank you for listening. I
6 don't know why I felt a need to point that out.
7 Thank you.

8 Q. Sure. And the weights of the
9 vehicles, when you compared the weights that
10 you used in your simulation to the weights of
11 the vehicles in the crash test, that's another
12 difference between the two tests -- or between
13 the two pools, as you describe them?

14 A. Well, I don't remember what the
15 weights were. But he said he used full gas
16 tanks. I -- so I'm thinking why are you using
17 full gas tanks. You're pumping the weight up
18 on the F-250. But I didn't look at his weight
19 compared to what my weight -- what my measured
20 weight was.

21 Q. Okay.

22 A. I'm wondering why he's not using
23 the measured weight of the vehicle as a

1 foundation. So yeah, there are -- so that is
2 something that could be looked at.

3 Q. All right. Are there any other --
4 other than the offset, which you said is the
5 primary difference, what are -- what are the
6 other differences between the crash test and
7 your simulation?

8 A. I think we discussed things to be
9 considered. I haven't tried to see the
10 differences between the two. That's not been a
11 concern of mine. I tried to look at his crash
12 test as to what he represented it to be. My
13 simulation was not done for his crash test.
14 Mine was another methodology. So I don't -- I
15 don't know the answer to the question off the
16 top of my head.

17 MS. CANNELLA: Mr. Hill, what --
18 what in his supplemental reports are we
19 referring to here?

20 MR. HILL: We're referring to his
21 criticisms of the crash test in his June 14
22 supplemental report.

23 A. Well, I can do that. But that's

1 different than comparing it to the simulation.

2 Q. Well, it's -- it's within the same
3 realm. You've made an allegation that the
4 crash test is invalid because the offset was
5 improper. And so I'm trying to establish how
6 that compares to your simulation -- your rerun
7 simulation that I've never had a chance to ask
8 you the first question about.

9 MR. HILL: So I think this is well
10 within the scope of his -- both of his reports.

11 Q. And so this leads to the question
12 of, with HVE, right, you could change the
13 parameters within your simulation to match the
14 parameters that were found in the crash
15 testing. Correct?

16 A. No.

17 Q. And why not?

18 A. Because I'm not -- I'm not trying
19 to re-create his crash test. I'm -- I'm trying
20 to understand the effect of -- on the subject
21 accident of lowering the truck and to
22 demonstrate what is intuitively obvious and has
23 been in the business as engineers using physics

1 and Newton's laws that when you strike the
2 structure of a vehicle, the frame of the
3 vehicle, you get less crush. And when you
4 don't strike those and hit tailgates, you get
5 more crush. That was the purpose of it.

6 I'm criticizing his crash test just purely
7 based on his crash test compared to the
8 accident. You're asking for another -- you're
9 asking me to do an analysis I haven't done.

10 Q. I'm asking you is it possible to
11 do that if you wanted to. Could you change the
12 offset in your simulation to the offset that
13 you claim existed in the crash testing? Is
14 that even possible within the HVE software?

15 A. Not in the line of the way I think
16 you're asking the questions. No. I mean,
17 somebody could go put in some numbers if they
18 want. But I wouldn't -- I don't know that I
19 would -- I don't know that I would compare
20 those two. But I'd certainly know that I would
21 compare my simulation to the accident.

22 Q. So you'd compare your simulation
23 to the accident --

1 A. His crash test --

2 Q. Go ahead.

3 A. The problem is his crash test is
4 not this accident. So if -- but I know what
5 the accident was. And I did a simulation for
6 that. But to just start doing a simulation to
7 compare to his crash test, I would have to
8 start the whole process over. And I don't know
9 where that would lead me. Certainly I'm -- I'm
10 not going to agree that I would even use a
11 simulation to analyze this crash test. I'd
12 have to do that analysis, and that hasn't been
13 done.

14 Q. Well, your simulation does not
15 analyze the actual subject crash in this case?

16 A. Sure, it does. It's a
17 representation of the subject crash with the
18 vehicles lower. It's -- it's not analyzing the
19 accident. But it's used to study the accident.
20 And I've determined that it's reasonable to do
21 it the way that we've done it, yes. But that
22 takes work to do. You can't just do that with
23 his crash test because that's -- he -- that's a

1 new accident. That's a different animal. I
2 can't -- I can't study raccoons as a zoologist
3 and then turn around and say I'm going to study
4 opossums, you know, the same way. You've got
5 to take the work -- you've got to do the work
6 and see if the methodologies you were using to
7 study it are going to -- are going to be
8 reasonable.

9 Q. That's exactly what I'm getting
10 at. To the determine whether the methodology
11 you used is reasonable, what have you done to
12 verify that HVE is a scientifically reliable
13 methodology for predicting crush in a
14 hypothetical accident like you've used it in
15 this case?

16 A. Well, that's -- I mean, I've seen
17 HVE used many, many times to study potential
18 accidents. You know, that's a use of it. I
19 mean, I've seen, you know, companies -- I mean,
20 I'm even sure I've seen auto manufacturers use
21 it, but the -- to study events that may or may
22 not happen. But in this case HVE was
23 specifically designed for crash reconstruction

1 using the -- the stock vehicles that hit frame
2 to frame like they -- like at levels that are
3 absorbing the energy, where the AV stiffness
4 coefficients are generated.

5 And therefore because in the simulation we
6 ran we did hit the vehicles bumper to bumper,
7 it means that it's a -- and it calculates it
8 using a methodology that's been well
9 established in the industry. And there's
10 papers that say that it's valid for this type
11 of study. That's why HVE sells it, is for us
12 to be able to do this. So we -- and in this
13 case we also have a treasure-trove of data in
14 the black box from the truck. We know the
15 delta-V's. We know the -- the -- you know, the
16 speed of the truck at impact. So therefore we
17 have reasonable constraints.

18 We have given stress test coefficients. We
19 have given geometries. We know we're hitting
20 bumper to bumper. We know we're engaging the
21 two structures of the two vehicles. We know
22 we're looking for an impact speed of X and a
23 delta-V of X. And we're using it to predict,

1 using Newton's laws, what the crush would be.

2 Q. What article -- you just mentioned
3 there are papers that said you could use HVE in
4 this context. Can you cite to any of them in
5 this deposition?

6 A. I don't have them memorized off
7 the top of my head. But I mean they
8 certainly --

9 Q. Okay.

10 A. -- are out there.

11 Q. All right. Have you done
12 anything -- my question -- my original
13 question -- and I move to strike your answer.

14 My original question is, have you performed
15 any testing or any analysis to validate that
16 your use of HVE in this case was a
17 scientifically reliable methodology?

18 MS. CANNELLA: Object to the form.
19 Asked and answered. Misstates the prior
20 question.

21 Q. Go ahead. It's a yes-or-no
22 question. Have you personally done anything to
23 validate that your simulation is a

1 scientifically reliable methodology?

2 MS. CANNELLA: Asked and answered.

3 Q. Go ahead.

4 A. I think that's what I described a
5 minute ago. I've been using the program for a
6 long time. My understanding that this is -- we
7 have plenty of data to -- that we're targeting
8 for, that we're given. We have crush stiffness
9 that are available from the program itself. So
10 literally purely within the program, it will
11 predict crush based on the impact speed that
12 we're given from the black box. And so we can
13 use that and match the delta-V's. And then the
14 program is designed to report what the crush
15 would be.

16 That is clearly a proper use of the program
17 based on my experience, my training, and the
18 literature that's out there in the industry.
19 This is -- this is -- as an engineer, I have no
20 concerns about that at all. We're not doing
21 anything new or novel with the program. This
22 is what we buy it for.

23 Q. Okay. You mentioned all of the

1 knowns -- all of the known information that you
2 use, which you say supports the use of HVE such
3 as all those things you just mentioned, the
4 block box data, the delta-V's, the speeds, and
5 so forth. All of that applies to the -- to the
6 actual crash testing as well, like the crash
7 testing has the benefit of all of those same
8 known data points. Correct?

9 A. I disagree. I don't -- that is a
10 huge broad question. You just went from asking
11 me what I did to about Grimes. I think that
12 that same black box data is available. But to
13 just blanket somehow how that relates to the
14 crash test, I need something specific about the
15 crash test. I can't just -- I don't know what
16 the -- what I'm being asked, it's just too
17 broad of a -- of a potential here.

18 Q. It's pretty simple. Other than
19 the offset, okay, what other data point did the
20 crash test not follow?

21 MS. CANNELLA: Object to the form
22 of the question. I think -- I think this is
23 outside the scope of his report.

1 MR. HILL: Not even close to being
2 outside the scope.

3 Q. But go ahead.

4 MS. CANNELLA: Which -- which part
5 of the report are you asking about, the
6 supplemental --

7 MR. HILL: He is -- he is
8 critical -- the entire report is critical of
9 the crash testing. And I'm asking him a
10 specific question about what part of the crash
11 testing other than the offset was incorrect.

12 A. Well, we've said the offset is the
13 thing that really invalidates it because it's a
14 completely different crash to the accident.
15 And then after that Grimes -- most of my report
16 is about Grimes's characterization of it
17 without actually having any data that he used.
18 He wants to say it was a visual. And so we
19 tried to provide in the report things that
20 demonstrated those things. So the first part
21 of it is the crash test is not valid because
22 it's not a reasonable representation of the
23 accident. And Grimes himself admits that in

1 his deposition.

2 And then the second part of the report has
3 to do with basically you can -- basic
4 misrepresentations Mr. Grimes makes about
5 conclusions. As far as differences, I don't
6 know that I have any cataloged. The offset is
7 the thing that has been most foremost in my
8 mind. I think that -- I think that we have to
9 go to the results and, you know, after that
10 look at the results as -- as issues such as
11 that, you know, the impact wasn't in the right
12 location, that type of stuff.

13 Q. Okay. So what does it take in the
14 HVE software to change the impact location, the
15 offset? How would you do that if you wanted to
16 do it?

17 A. We just change the position of the
18 vehicles.

19 Q. Okay. If you were to be asked by
20 Ms. Cannella to run an HVE simulation that
21 would replicate the crash testing, what would
22 you need to do other than what you just
23 described, which is change the offset or impact

1 location to what you believe it was in the
2 crash test?

3 MS. CANNELLA: Object to the form
4 of the question. Goes outside his supplemental
5 report.

6 Q. Go ahead.

7 A. I -- I'd take time to study before
8 I even tried to do anything. I would have to
9 look at the crash test from that perspective,
10 which I haven't done. I've literally just used
11 his data and his answers. You're asking me to
12 do a separate engineering analysis. I'm not --
13 I'm not willing to tell you what I can do or
14 how I would do it or discuss even concepts of
15 it until I take the time to look at it from
16 that perspective. I know it sounds simple to
17 you, but it's not. That's -- that's how
18 mistakes are made. I mean, it needs to -- it's
19 an engineering problem that needs its due time
20 and effort before I can start answering those
21 questions.

22 Q. But as you sit here today, you
23 can't identify what you would need to do as

1 part of that engineering effort in order to
2 simulate the crash test?

3 A. I wouldn't start until I took the
4 time to answer that question. And I would
5 start -- I would open that concept up. And I
6 would arrange my file materials, and I would
7 start looking at it, and I would start asking
8 the questions. I'm not arrogant enough to
9 think that I know the answer before I do the
10 work. I would do some work to prepare myself
11 to answer that question, and I have not done
12 that.

13 Q. But it would be possible to do
14 that?

15 MS. CANNELLA: Objection to the
16 form of the question. Goes outside the
17 supplemental report.

18 Q. Go ahead.

19 A. No. We don't know if it's
20 possible or not. We have to -- we have to
21 start looking at that.

22 Q. What about if it's possible to
23 compare your simulation to the actual crash,

1 how is it not possible to compare your
2 simulation to the crash testing?

3 A. Well, because we haven't done the
4 work. You have to sit down and look at the
5 crash test and then understand it and then
6 start from a simulation standpoint, is this
7 something that we should or should not be
8 seeing. See, Grimes's whole ridiculous
9 argument is that because -- is that there was
10 some kind of an offset that renders the
11 simulation useless. This is not an offset --
12 not an offset. Excuse me -- an override crash.
13 It's not an override. If his crash test proved
14 anything, it's that if you lower the bumpers,
15 you lose the override component of this
16 accident.

17 And so if his argument is you can't use the
18 simulation because there is override, then we
19 have to do the same thing when we start moving
20 the impact location. We have to stop and look
21 at that and see if it affects something like
22 that. So I'm just saying I can't answer your
23 questions about trying to simulate the crash

1 test because I have to take the time to look at
2 it and -- and consider that as an engineer. I
3 shouldn't answer questions I haven't looked at
4 and considered because there's reasons as to --
5 that might come into play. And I don't presume
6 to know all of those things off the top of my
7 head for something I have not analyzed from
8 that perspective.

9 I have looked at his crash test relative to
10 the accident. I've looked at my simulation
11 relative to the accident. You're asking for a
12 whole other piece of analysis. I'm not -- I'm
13 not prepared to do the analysis sitting here on
14 a new problem. It's a whole new problem.

15 Q. I appreciate your answer,
16 Mr. Buchner. We're going to be here all day.

17 MR. HILL: I move to strike the
18 response.

19 Q. It was a simple question. I said
20 is it possible. And then you went on to --
21 your response was, well, I haven't started that
22 yet.

23 A. Well, I can't answer if it's

1 possible. An engineer should not answer if
2 it's possible unless he can reasonably know if
3 it's possible. I can't reasonably know that
4 until I do the work. And that's -- I mean, and
5 that's the difference between you and me. I'm
6 an engineer. I actually know that there's a
7 reason you have to go do the work. You just
8 think it's, hey, just, you know, change the
9 number and put it in and it magically -- that's
10 not -- that's not a reasonable response to me
11 as a professional engineer. I can't answer
12 your question because I don't know enough to
13 answer it.

14 Q. Let me ask it this way. Do you
15 have any reason to believe that it would not be
16 possible?

17 MS. CANNELLA: Objection. Asked
18 and answered.

19 Q. Go ahead.

20 MS. CANNELLA: And confusing.

21 A. I'd have to -- I'd have to look at
22 that question from an engineering perspective
23 and take time to look at it. I don't -- I have

1 not done that. I cannot do a completely brand
2 new complete accident investigation or a
3 complete test versus simulation investigation
4 in a casual conversation where you just bring
5 it up for the first time. No. I -- that would
6 be inappropriate.

7 MR. HILL: Move to strike as
8 unresponsive.

9 A. Excuse me. I'm going to respond
10 to that. Just because you don't understand
11 what I'm saying, don't say it's not responsive.
12 I'm giving you the exact right answer as an
13 engineer. Professionally this is the right
14 answer. Just because you don't appreciate it,
15 I'm sorry.

16 It's the right answer. It's not as easy as
17 you want it to be. And it's not that simple
18 answer that you want. The answer is, we don't
19 know until we do it, so I can't tell you the
20 answer.

21 Q. Let's --

22 A. I can't speculate the answer.

23 Q. Let's approach it this way. In

1 your prior deposition when talking about this,
2 you said that HVE is a robust program for
3 analyzing bumper-to-bumper or
4 structure-to-structure crashes.

5 A. Yes, sir.

6 Q. We can agree?

7 A. Yes.

8 Q. The crash testing was a
9 bumper-to-bumper, structure-to-structure crash?

10 A. Actually no. They missed some of
11 the structure in the way they did it. They
12 moved the -- they moved the tow hook, which is
13 the tip of the frame, outside the main
14 structure of the Escape. They moved it so far
15 to the left that it's not actually -- there's
16 some -- there's some worry about how -- the
17 effect of that. It obviously over -- it
18 disadvantaged the Escape and made the crush
19 more than it would have been had that not
20 happened.

21 In the accident, that frame horn, that tow
22 hook, the tip of the frame, that bumper area
23 did hit on the rear of the Escape and left a

1 really nice mark that we can see on that rear
2 structure area. So if we -- if we just lower
3 it, well, we're getting good engagement. But
4 as far as a move to the outside, you're now
5 starting to mess with that thing that you just
6 asked about or that you said I told you about
7 previously. That was a -- that was very
8 accurate, what I said previously. Those are
9 the types of things that have to be gone
10 through.

11 That's just an example of the types of
12 things. It doesn't mean it's all the things.
13 And I don't know what all the things are. So I
14 can't answer the question until we do the work.
15 That's just a good example of the type of thing
16 that ought to be considered.

17 Q. I did not ask you whether the
18 crash test was representative of the accident.
19 I didn't ask you about whether it properly
20 represented the offset. This question was
21 simple. Regardless of the offset, regardless
22 of the positioning, do you agree it was a
23 bumper-to-bumper and structure-to-structure

1 accident in the crash test?

2 MS. CANNELLA: Objection. Asked
3 and answered.

4 Q. That's a yes-or-no question.

5 MS. CANNELLA: Asked and answered.

6 A. I explained it very well in the
7 last answer.

8 Q. You have testified in your report
9 that this was not an override. It was a
10 bumper-to-bumper, structure-to-structure crash
11 test. Are you now saying that you don't --

12 MS. CANNELLA: Objection.

13 Q. -- believe that?

14 MS. CANNELLA: Objection. You
15 mis-testified -- you mischaracterized his
16 testimony and report. And asked and answered.

17 Q. Go ahead.

18 A. I'm not a hundred percent sure
19 what you were asking.

20 Q. It's very simple. You put in your
21 report that --

22 A. I'm sorry. I'm sorry. We've
23 already -- I don't -- the very simple part of

1 the question is your perspective. That doesn't
2 mean I can answer -- it doesn't mean it's going
3 to be a simple question from my perspective
4 because you don't -- you don't have all of the
5 perspective I have. We cannot say very simple
6 before the question. I wouldn't have to answer
7 to something and agree to something that may or
8 may not be true.

9 Q. Well, wait a second now. I can --
10 I'm not asking a complicated question.

11 A. You are. That's the problem.
12 Just don't say very simple and insinuate it's a
13 simple question. Just please, very simple is a
14 statement followed by a question. If we could
15 just have the question and let me determine
16 whether --

17 Q. I don't need to be lectured about
18 how I ask my questions. If you disagree with
19 my characterization of the question, that's
20 fine. I'm trying to make the question --

21 MS. CANNELLA: Mr. Hill, calm
22 down. Calm down. Don't be yelling at the
23 witness. He's trying to explain to you his

1 answer. You don't like it. You want it to be
2 yes or no. And he doesn't have a yes or no
3 answer.

4 MR. HILL: No. He's criticizing
5 the form of my question, which I can use the
6 word --

7 Q. If you don't like very simple,
8 then explain that it's not a very simple
9 question.

10 MS. CANNELLA: That's what he just
11 did.

12 Q. I'm trying to make the question
13 as -- as limited as possible so that it doesn't
14 bring in all of these other variables that
15 you're bringing up. I'm trying to establish
16 that HVE, if you can use it to simulate a
17 bumper-to-bumper crash like you did, you could
18 use it to simulate a bumper-to-bumper crash
19 like the crash test by just simply changing the
20 offset because that's the one thing you've
21 identified that's different between the crash
22 test and your simulation?

23 MS. CANNELLA: Asked and answered.

1 Q. And you're denying that that's
2 true?

3 A. I'm not denying anything. I'm
4 telling you, you can't just blanket say that's
5 true. You've got to --

6 Q. So you --

7 A. -- go do the work --

8 Q. No. You --

9 A. Can I answer?

10 Q. Sure.

11 A. For the reasons I explained, it's
12 a very -- I have concerns over answering the
13 question at all. And that's what I'm telling
14 you. It -- it takes some effort. And that's
15 an analysis that hasn't been done. And so it's
16 not a simple question at all. It's an
17 incredibly complex question.

18 Q. All right. If you ran an HVE
19 simulation mirroring yours in this case exactly
20 except you changed the offset --

21 A. Let me turn the volume down.
22 You're -- you're -- I mean, literally it's
23 hurting my ears. Let me just --

1 Q. Sorry. I've had trouble in the
2 past with people hearing me. So I'll turn it
3 down myself. I apologize. I've had multiple
4 instances in this very case where they said my
5 speaker doesn't work.

6 A. And I remember that from the last
7 depo. I mean, that's -- that's a hundred
8 percent fair. Thank you. We're good.

9 Q. Yeah. So my question is, could
10 you -- is it possible -- not have you done it.
11 Is it possible to take your exact HVE
12 simulation that you ran in this case and change
13 the offset to match the crash testing offset as
14 you've determined that offset to be? Is that
15 even -- is that possible?

16 A. For the reasons we've talked
17 about, I don't know.

18 Q. Okay.

19 A. I don't know if it would be
20 representative or not. I have great concerns
21 if it would work. So we don't know.

22 Q. Well, I'm not asking you if it
23 would be representative. I'm asking is it

1 possible to run that type of simulation?

2 A. Well, I already told you anybody
3 can go in and change a number and run
4 something. It doesn't mean that it's valid or
5 that it's good or anything like that. I mean,
6 you can -- so I mean, is it possible to move
7 the positions? Yes. Is it reasonable, will
8 you get any value from it? I don't know.
9 That's -- the analysis has to be done. You
10 can't -- but yeah, people can make -- I mean, I
11 can make it fly out of the air and land on top,
12 I mean, if I want to. But that doesn't mean
13 that's representative or reasonable or a good
14 use of the program or that it would be
15 accurate.

16 Q. What can you cite to as we sit
17 here today that would cause that HVE run I've
18 just proposed, your exact run but with a
19 different offset to all of a sudden be
20 unrepresentative or unreliable?

21 A. Well, I've explained, you have to
22 do an analysis to think about this. That is a
23 complete separate engineering analysis than

1 what we're dealing with here. We're using a
2 simulation to look at the accident, which we
3 decided is reasonable and appropriate. It's
4 just part of our range. Remember, we did it
5 hand calculations or standard crush
6 calculations. We wanted to do it a different
7 way, and we found the simulation. The one that
8 gave the worst results, we're reporting as our
9 answers, which is the simulation. So it's just
10 our attempt to get a range. If we go try to
11 model the crash test with a simulation, we have
12 to go -- we have to go do the same thing again.
13 We have to go through all of that stuff again,
14 and nobody has done that. So I don't know how
15 to answer the question. You're asking me to do
16 a whole test reconstruction as I'm sitting
17 here. And we've got, you know, hundreds of
18 hours of engineering in on -- on these things
19 we have done.

20 You're asking me to do all -- to answer
21 questions about something we haven't done. And
22 I'm not comfortable doing that. And there are
23 concerns. I gave you one big example is that

1 they moved the tow hook and the frame outside
2 the back of the vehicle. That -- you know, and
3 that's -- that's an issue. That would be
4 one -- an example of an issue that would have
5 to be looked at.

6 Q. How would you look at that issue
7 other than changing the offset?

8 A. I don't know. I haven't done the
9 work. That's the thing about it. You have to
10 do the work. I have to sit down and say, okay,
11 we're going to prepare ourselves to look at
12 this. That's -- you think I'm -- I'm not
13 omnipotent. I have to do the work.

14 Q. What work are you referring to?
15 You just said the tow hook is outside of where
16 it was in the crash. That relates solely to
17 the offset. What work would you need to
18 determine how to deal with that?

19 MS. CANNELLA: Objection. Outside
20 the scope of his supplemental reports.

21 Q. Go ahead.

22 A. How does that affect the -- what
23 we call the frame level impact? You've

1 actually moved a good part of the truck
2 outside the -- outside the -- where it was in
3 the accident. Well, we've got good overlap in
4 the accident. You increased the offset by 45
5 percent.

6 I don't know as I sit here the answer to
7 that question. I'm not smart enough. I have
8 to do the work, just like I did in this one. I
9 have to -- I have to -- I have to sit and study
10 that. I don't know.

11 Q. Well, I'm not asking --

12 A. I can't give you the answer.

13 Q. I'm not asking --

14 A. Go ahead.

15 Q. I'm not asking what the result of
16 an HVE simulation with those parameters would
17 be. I know you can't answer that.

18 A. No, I'm not even pretending to
19 tell you a result. I've never even mentioned
20 result today. I'm saying I don't know that I
21 can use it for that. It takes work to look at
22 that because there's going to be -- that's a
23 new analysis. I can't tell you how your house

1 is going to look until I draw it and design it.
2 I can't tell you if it's a good house. I have
3 to do actually do the work if I'm an architect.
4 You're asking me to tell you an answer that --
5 that I can't know.

6 Q. I'm asking you, are you saying
7 that you can't answer the question as to
8 whether HVE is capable of simulating the crash
9 test?

10 MS. CANNELLA: Asked and answered
11 many times.

12 Q. Is that your answer, that without
13 doing work, without doing an investigation,
14 without -- you can't answer here today whether
15 HVE is even capable of simulating an accident
16 like the crash test?

17 MS. CANNELLA: Same objection.

18 A. Yes. For all of the things I've
19 talked about.

20 Q. Okay.

21 A. That can't be given today.

22 Q. All right. And you've explained
23 all of the reasons already why you can't answer

1 the question as to whether HVE is capable of
2 simulating the crash test?

3 MS. CANNELLA: Objection.

4 Q. You've given us all the reasons
5 for why you can't answer that question?

6 MS. CANNELLA: Objection. Asked
7 and answered.

8 Q. Okay. Asked and answered. So
9 it's been answered. That's what I want to
10 confirm.

11 A. Well, we don't know the -- we
12 don't -- we have to do the analysis before we
13 can give all the answers. We can give you an
14 example of an answer. But we don't know. So
15 no, the analysis has to be done before the
16 question can be answered. That's -- that's my
17 answer is you don't know until you do the
18 analysis. And -- and that's what you're
19 saying.

20 So no, we don't know. And I've given you
21 examples of why and tried to explain why -- why
22 it's not simple at all. That's the -- that's
23 the correct answer. And it's the same thing

1 I've been trying to say for the last half hour.

2 Q. Is it possible to run the HVE --
3 you ran it at twelve inches offset. Can you
4 run it at 13?

5 A. We've answered this question.

6 Q. So the answer is yes? I want to
7 make sure it's clear.

8 A. No. No.

9 Q. You can run it at 13?

10 A. No. You're wrong. We've told you
11 that when -- that you can make it do any -- you
12 can put the number in and run it. But it's not
13 necessarily going to be valuable or
14 representative, just like the dropping the car
15 from the moon.

16 Q. That's -- but that's not my point.

17 A. But no, it is your point.

18 Q. Okay.

19 A. And you're not listening to my
20 point. My point is, we don't -- we cannot
21 change those things until we do an analysis
22 about them. I would not do it at 13 and say it
23 had any use for analyzing this subject accident

1 at all, period. To go to 13 means we're now
2 studying other accidents.

3 At twelve I know I'm conservative, and I
4 know I'm consistent with my deposition, and I
5 know that it allows me to give my opinions. It
6 doesn't mean we couldn't use 13, but I have to
7 sit and decide if it would be appropriate to do
8 that.

9 I've done that at twelve. You keep wanting
10 me to answer questions that haven't been
11 engineering processed as a -- as a responsible
12 engineer. I can't answer the question because
13 we haven't -- that's outside the scope of what
14 we've done in the past.

15 Q. I haven't asked you whether that
16 type of test would be relevant to this case. I
17 didn't ask you whether it was relevant to the
18 subject accident.

19 A. I need a restroom break. I need a
20 restroom break.

21 Q. The question was only, can you run
22 the --

23 THE WITNESS: Can I take a

1 restroom break?

2 MR. HILL: Sure.

3 THE WITNESS: Okay. Thanks.

4 THE VIDEOGRAPHER: The time is
5 1:03 p.m. We are off the video record.

6 (A break was taken.)

7 THE VIDEOGRAPHER: The time is
8 1:13 p.m. We're back on the video record.

9 MR. HILL: Thanks.

10 Q. (Mr. Hill) Mr. Buchner, I'm sorry
11 if we got a little sideways there. I -- I was
12 only trying to speak loudly so that you could
13 hear me because I know we had problems the last
14 time. And I apologize about the frustration of
15 us misfiring. And I'm trying to ask you as --
16 as direct and as, you know, intelligent
17 questions as I can. And so I appreciate your
18 attempts to answer. But I think we've
19 established a record now of what you can and
20 can't answer. And I'm glad to revisit that --
21 any of that if you would like, but I don't
22 intend to.

23 MS. CANNELLA: I would like to say

1 for the record that the volume of your voice
2 and the aggressiveness with your questioning
3 was not related to the -- to the technical
4 difficulties and it goes up the more irritated
5 you are with him. So if you could please lay
6 off of that, we would appreciate that.

7 MR. HILL: I'm fine with that. I
8 will note that he was irritated with me as
9 well.

10 A. I'm happy to proceed, sir. Thank
11 you.

12 Q. All right.

13 A. And I did need the break.

14 Q. Yeah, I understand. And I'm happy
15 to take a break at any time. And I'll admit, I
16 needed a break as well. So can you cite to any
17 instance that you're aware of where an HVE
18 simulation was found admissible in court to
19 support opinions regarding the level of crush
20 that would be predicted in a hypothetical
21 crash?

22 A. I've never tried to do that. No,
23 sir. I would imagine that we've used it to

1 demonstrate before. But I've never even
2 thought about that question before now. I
3 don't know.

4 Q. But you're not aware of any
5 instances where that's actually happened?

6 A. I might be. I -- that's a big
7 question.

8 Q. And you have never in your career
9 attempted to use an HVE simulation like this
10 one as admissible evidence in court to support
11 opinions regarding the predicted level of crush
12 in a hypothetical crash before this case?

13 A. I can't say I haven't. I mean,
14 we -- we use it to study accidents all the
15 time. I mean, that's -- that's what it's there
16 for. And I've seen other people, you know, use
17 it. I think I've even seen the auto
18 manufacturers use it to study what happens in
19 crashes so they don't have to crash cars, which
20 is exactly what we're doing here. So I think
21 we've done this many times, just not here
22 knowing any examples of it. I'm here to look
23 at this case.

1 Q. Well, that wasn't my question.
2 Can you cite to an example where you've given
3 testimony like this using HVE before where it
4 was found admissible in court?

5 A. Yeah, I don't know. That's too
6 big a question for me to know the answer to
7 here today. I don't know.

8 Q. Okay. I think I already know how
9 you're going to answer this, but I feel like I
10 have to ask the question. If the HVE software
11 that you use is accurate in predicting crush
12 and intrusion, would you agree that it should
13 be able to predict the levels of crush and
14 intrusion that were seen in the crash test if
15 the proper parameters that were involved with
16 the crash test are input into the software?

17 MS. CANNELLA: Object to the form
18 of the question. Goes outside the scope of his
19 supplemental testimony. And asked and
20 answered.

21 Q. Go ahead.

22 A. The answer to that is the same as
23 the other questions. I don't know. I can't

1 agree to that at all as I sit here for the same
2 reasons we've been talking about.

3 Q. And I don't want to revisit that.
4 But one of the main reasons is that you haven't
5 tried that and haven't done the work. Is that
6 fair?

7 MS. CANNELLA: I object to the
8 form of the question. Asked and answered.
9 Mis-summarizes his testimony.

10 MR. HILL: That's why I'm asking.

11 MS. CANNELLA: Mr. Hill, if we're
12 going to keep going on this line of
13 questioning, I need you to explain to me why
14 questions about whether Mr. Buchner used HVE to
15 re-create Mr. Grimes's crash test are relevant
16 to his report -- his supplemental report. I
17 don't -- he did not do it. And you've been
18 asking him questions about if he could do it
19 for probably close to an hour now. So if it's
20 not work he did, I don't understand how this is
21 relevant to his supplemental reports.

22 MR. HILL: It's relevant to his
23 supplemental report of May 8 of 2024 where for

1 the first time he actually provided legitimate
2 HVE data and produced a simulation that
3 included the axle of data upon which that
4 simulation was based. And so well within the
5 scope of this deposition is the reliability of
6 the HVE methodology that he used in generating
7 his FR26 amended report.

8 MS. CANNELLA: And -- and those
9 questions are fine. But the questions you've
10 been asking him are about could he use HVE to
11 re-create a Defense expert -- Exponent crash
12 test, which is not -- not in his report. It's
13 not work he did. It's not work he was asked to
14 do or tried to do. It's not work that the
15 Defense did. So it's not an issue here.

16 And you know, if you want to ask him about
17 his data that he produced with his May report
18 or reliability of HVE in general, that's fine.
19 But the questions about whether he could do
20 work that he didn't do for the Defense side is
21 not -- it's not in his report. It's not
22 relevant to his report. And I'm going to
23 object to any more of that.

1 MR. HILL: It relates to the
2 reliability of HVE.

3 MS. CANNELLA: It doesn't. It
4 doesn't. It relates to the reliability of HVE
5 in a crash test that he did not analyze. That
6 he didn't -- he did analyze it, but he didn't
7 use HVE to create it.

8 MR. HILL: All right. I'm not
9 going to sit here and argue with you. I'll ask
10 my questions. You can object, and we can take
11 it up with the --

12 MS. CANNELLA: Well, I'm getting
13 real close to telling him not to answer things.
14 So that's why I understand what your argument
15 is. So if we have to call the Court, I want to
16 understand what your argument is. So I'll
17 agree to it if it's reasonable. But it doesn't
18 seem reasonable to me at this point.

19 MR. HILL: The argument is that
20 HVE, if it's reliable, it should be reliable
21 across simulation of all accidents.

22 MS. CANNELLA: That's absolutely
23 not true. That's actually opposite of what

1 Mr. Grimes even said.

2 MR. HILL: Well, that's the point
3 I'm trying to make. So if you disagree with
4 it, that's fine. But in analyzing whether HVE
5 is reliable in the way he used it, I can ask
6 questions about what situations it is and what
7 situations it's not reliable.

8 MS. CANNELLA: And he's answered
9 that question a hundred times.

10 MR. HILL: He's never even
11 answered the question about whether it's
12 reliable in predicting the results of the crash
13 test. That's the question he won't answer.

14 MS. CANNELLA: He -- he has
15 answered that many times. He said it's
16 reliable in ours. And he would have to study
17 it to know if it's reliable in a crash -- in
18 the Exponent test. That's what he said for the
19 last 45 minutes. So you know, that's -- those
20 questions -- that line of questions, unless
21 there's something else you haven't told me
22 about why it would be permissible to go into
23 this stuff for so long, I'm going to object to

1 that. Just when you ask --

2 MR. HILL: He can't answer the
3 question or doesn't have the ability to answer
4 doing future work as to whether HVE could
5 reliably predict the crash test if the proper
6 inputs were put into the software.

7 MS. CANNELLA: You're talking
8 about the crash test again. He didn't do that.

9 MR. HILL: I'm not asking whether
10 he's done it. I'm saying with his knowledge
11 and expertise and his -- you know, he says he
12 knows all about HVE and how it's reliable and
13 how it's used in the industry and all its
14 applications. And so based upon all that, he
15 chose to use it in this case. And I'm asking
16 based upon all of that knowledge and
17 information and, you know, experience with HVE,
18 should it be able to predict the crash test
19 results if the proper inputs are put into the
20 software.

21 MS. CANNELLA: And he said he
22 doesn't know. I mean, he's literally said that
23 probably about twenty times.

1 MR. HILL: Okay. Great. Then
2 that's good. If he can't answer that question,
3 that's fine.

4 MS. CANNELLA: Can we move on?

5 MR. HILL: Yeah. That was the
6 last question I was asking on the issue, and
7 he's answered it.

8 MS. CANNELLA: Great.

9 Q. (Mr. Hill) Hold on. Let me share
10 my screen. Can you see my screen?

11 A. Yes, sir.

12 Q. All right. This is your June 14,
13 2024 letter to Ms. Cannella that's titled
14 rebuttal report. Is that okay if we call it
15 rebuttal report?

16 A. Yes, sir. Thank you.

17 Q. All right. And in connection with
18 preparing this report, the additional material
19 you received was the report and deposition of
20 Mr. Grimes and Mr. Crosby, their file --
21 Grimes's file material, and the scanned data
22 photos and video data from the crash test. Is
23 that the full list of material that was new

1 that you used in generating this rebuttal
2 report?

3 A. Yes, sir.

4 Q. Okay.

5 A. It says Grimes's file materials
6 too. I don't know if you listed that. But
7 that -- that lists everything.

8 Q. I did. I meant to if I didn't.

9 A. All right. We're good.

10 Q. All right. Under your observation
11 section, your first point is the total crush on
12 the test Escape is significantly less than in
13 the accident. How do you define total crush?

14 A. We did a PowerPoint based on that.
15 In other words, you'd look at the -- I mean,
16 clearly the crush at the bumper level in the
17 crash test is going to be more than in the
18 accident because there was bumper-to-bumper
19 contact. So you know, at the -- at the
20 critical level, which is the frame level,
21 there's more crush. But if you look at the
22 whole car, there's -- there's more crush in the
23 accident because the frame wasn't engaged.

1 Q. And I'm just asking how you -- how
2 do you quantify that? What do you mean by
3 total crush, and how did you make that
4 determination?

5 A. This PowerPoint that goes through,
6 we went level by level and sliced the -- sliced
7 the car into levels. And we actually
8 quantified it at each level. And at every
9 level there was more crush except for, you
10 know, at that frame level.

11 Q. Right. And so that's just a
12 summation of your level-by-level analysis of
13 the two crushes.

14 A. Yep.

15 Q. That's what I'm trying to get.

16 A. Yes, sir. Thank you.

17 Q. All right. And did you quantify
18 an actual amount -- or you call it
19 significantly less. Did you actually come up
20 with a number?

21 A. No. Remember, Grimes didn't make
22 any measurements. We didn't either. We did a
23 visual comparison at the levels, and we did it

1 so everybody could see it. So no, I -- I don't
2 know that I've done a number. I don't remember
3 a number. If I did, it would be in here
4 somewhere.

5 Q. And that same applies to item
6 number two, you don't know if -- is that right?

7 A. Right. We did the drawings. We
8 can see it in the drawings. Yeah. Let me --
9 let me go down here and look at the drawings.
10 Maybe we did quantify it on the drawings. So
11 I'm running down in the report. Yeah. Sorry.
12 Let me make it so I can move it a little
13 quicker.

14 Nope. I don't think we did a number unless
15 it's stated in a paragraph somewhere.

16 Q. All right. Item number three
17 states, the slope of the crash pulse was
18 greater in the test vehicles than the accident
19 vehicles. That's also true of your HVE
20 simulation. Correct?

21 A. Well, yeah. Because the vehicle
22 is stronger. The -- the Escape is stronger at
23 the frame level.

1 Q. And the fact that there is -- the
2 slope of the crash pulse was different -- was
3 different between your simulation and the
4 accident vehicles doesn't invalidate your
5 simulation, does it?

6 A. No. Because he -- he simulated
7 it -- he did a crash test for a different
8 accident than our accident. In other words,
9 they're different accidents. He did one with
10 the truck going too far to the left. And we
11 did one that represents the subject accident.

12 Q. Right. But in both instances, the
13 slope of the crash pulse was greater than the
14 accident vehicles. And that fact did not make
15 your simulation invalid?

16 A. No. No, it doesn't. That -- that
17 fact alone just tells you that the Escape is
18 stronger, that the Escape at the bumper
19 level -- even with this advantage by moving the
20 vehicles 45 percent further to the left, the
21 Escape still is stronger and resists crushing
22 more.

23 Q. Right. So there's nothing

1 unexpected about item number three with either
2 test?

3 A. There's nothing what?

4 MS. CANNELLA: There's nothing
5 what?

6 MR. HILL: Unexpected.

7 MS. CANNELLA: I object to the
8 form of the question as vague.

9 Q. I think you already answered it.
10 Right?

11 A. Okay.

12 Q. All right. Item number four, when
13 comparing the crash test to the accident, you
14 said the vehicle-to-vehicle force was greater
15 in the test than in the accident.

16 A. Yes.

17 Q. Okay. Is that also true about
18 your HVE simulation?

19 A. Yes.

20 Q. Okay. We -- and I think we've
21 covered this. But item five, the basis of your
22 opinion that the F-250 did not override in the
23 test is because there was bumper-to-bumper

1 contact?

2 A. Well, there was full
3 bumper-to-bumper -- there was bumper-to-bumper
4 contact. And the frame level structure of the
5 Escape remained in contact with the frame level
6 bumper level of the F-250 the whole time. I
7 show it in photographs and PowerPoints.

8 Q. Was there any point where the
9 F-250 bumper was on top of or beyond the level
10 of the bumper of the -- of the Escape in the
11 test?

12 A. Well, we're now getting into --
13 because of the way the test was run, there's --
14 there's problems with it. But when we look at
15 the structure, I would say no. If you want to
16 argue about the bumper, where the bumper was
17 able to engage the -- the -- the tow hook of
18 the F-250, it stayed engaged the whole time.
19 And where the frame was able -- of the Escape
20 was able to engage the bumper, it stayed
21 engaged the whole time.

22 Q. All right. And item number six,
23 when you talk about the F-250's bumper striking

1 the test Escape's bumper flush, was the impact
2 from the F-250, was it the secondary energy
3 absorption brackets that impacted the Escape's
4 bumper or was it actually the F-250 bumper?

5 A. It was the -- it was -- the bumper
6 was flush to -- the two bumpers were flush to
7 each other. You know, the tow hook sticks out
8 a little bit. But no, we're not talking about
9 the seize brackets engaging that level -- that
10 frame level. They were down below that. It
11 was the bumper-to-bumper level that was flush.

12 Q. Right. And so that's what I
13 wanted to clarify. In the test the seize
14 brackets didn't have any impact on the
15 accident -- on the crash test. Is that true?

16 A. Well, leaving the offset problem
17 out, the seize brackets were not called upon in
18 the test -- yeah, they were kind of called upon
19 because of the offset, so I can't say that.
20 Yeah. Because of the offset, they were called
21 upon on the driver side.

22 Q. All right. Number seven says the
23 test resulted in less rear seat deflection and

1 movement than in the accident. Do you agree
2 that there was rear seat deflection in the
3 crash test?

4 MS. CANNELLA: Objection.
5 Which -- which seat are we talking about?

6 MR. HILL: Well, I'm using what he
7 says up here, less rear seat deflection. So
8 I'm talking about whatever he's talking about.
9 He -- you tell me.

10 A. Well -- well, less doesn't mean
11 there was some.

12 Q. And that's what I'm getting at.

13 A. Well, let me answer. Grimes
14 agrees with this. I think from my memory there
15 was some. But he didn't measure the position
16 of the seat and report the relative positions
17 of the seat start to finish of his crash test.
18 So my memory is that there was -- that I think
19 there was some, but it was remarkably less than
20 in the accident. But I don't know. So that's
21 my memory right now. But the photos show what
22 they show.

23 Q. Okay. And you haven't examined

1 the crash test to determine whether there was
2 seat deflection in the crash test or how much
3 seat deflection per, if there was?

4 A. Well, if the floor pane moves, it
5 would be some movement. So maybe I can say
6 there was some movement in the seat. But I
7 don't remember if there was deflection in the
8 seat relative to the attachment points and
9 whatnot. But it certainly wasn't -- I mean, in
10 the accident the rear seat is tilted way
11 forward. And in the crash test, it's still
12 reasonably the same reclined level and that
13 type of stuff. So the items will speak for
14 itself.

15 But you know, there -- there probably was
16 some shifting where the seat is just due to the
17 crush at the floor pan level and other -- other
18 things. Regardless of the reasons why, there
19 was less in the crash test than in the
20 accident. And that's what this says.

21 Q. All right. A related question you
22 mentioned the deformation of the floor pan. Do
23 you know whether the rear hatch of the Escape

1 was pushed in enough to actually impact the
2 rear seat in the crash?

3 A. Yeah. Well, the cameras that were
4 supposed to show that didn't function in the
5 crash test. You know, the cameras moved. So
6 we don't -- we're kind of deprived of some of
7 the information that could have been had. I
8 haven't thought to -- I don't believe they did,
9 but I don't -- as I sit here, I haven't been
10 able to do that analysis either.

11 Q. Okay. So as we sit here today, if
12 I understand you, you don't know whether the
13 rear hatch of the Escape impacted the second
14 row seat back in the crash test?

15 A. In the crash test, no. What I
16 tried to use to look for that type of stuff, I
17 think there's two video cameras, and neither
18 one of them functioned.

19 Q. Do you know whether there was any
20 gap after the crash test between the rear hatch
21 and the rear seat?

22 A. My recollection is there is, yes,
23 sir.

1 Q. All right. Did you -- do you have
2 a photograph or whatever that shows that? Do
3 you -- what proof do you have that there was a
4 gap between the hatch and the rear seat?

5 A. Well, when we did the slice, there
6 was a gap, a space between the hatch and the
7 rear seat.

8 Q. Was there a space between the
9 hatch and the rear seat in the subject Escape
10 after the accident?

11 A. Yes.

12 Q. And did you compare the size of
13 that space from the subject accident to
14 whatever space that you say existed in the
15 crash Escape -- in the crash test Escape?
16 Sorry.

17 A. No, I haven't -- I haven't done
18 that.

19 Q. Okay. Do you have any opinions
20 with regard to whether the crash test could
21 have resulted in injury to Cohen Bryson if he
22 had been in that vehicle at the time of the
23 test?

1 MS. CANNELLA: Objection. Outside
2 the scope of his expertise and testimony.

3 MR. HILL: Well, that's exactly
4 what I'm trying to establish.

5 Q. That's outside of your expertise.
6 Right?

7 A. Yes. I'm not talking about
8 injuries in the crash test. No, sir.

9 Q. Right. That's all I was trying to
10 establish is that you're not an expert in
11 biomechanics. And you don't intend to give any
12 opinions as to whether the intrusion, crush,
13 however you want to describe it that occurred
14 in the crash test, would or would not have
15 caused an injury to Cohen Bryson?

16 A. Right.

17 Q. Okay. If we go down in this
18 report a little bit -- let's see here -- give
19 me one second. Sorry. Item number two on the
20 page right now, you talk about test did not
21 provide markers to record what the test vehicle
22 offset was. What type of markers would you
23 have expected to be on the vehicle?

1 A. Crosby describes what he typically
2 does to document it. He didn't show a photo of
3 it, but he could have used whatever he used
4 because I'm sure it would have been good
5 enough. In the past we've put a stick or
6 something coming out the front, something that
7 is brittle and will break and, you know, that
8 will leave a mark. We've -- we've put paint on
9 the vehicles. One of the easiest things to do
10 is put -- put marks on the ground so that the
11 overhead camera and the other cameras can see
12 if the vehicle goes along those marks. And if
13 it doesn't it can easily tell how far off the
14 mark it is. So it basically uses a simple
15 series of targets, markers, indentures, paint
16 transfer, things like that. Even tape -- even
17 tape will -- will transfer so you can tell
18 where it is, any one of those. Or put the
19 cameras where you can do the work.

20 Q. And when you say tape, you're not
21 talking about the centerline tape. You're
22 talking about a tape that would leave a mark
23 that would be on the edge of -- the front of

1 the vehicle?

2 A. Right. Put a piece of tape where
3 it's likely to leave a mark or put a piece of
4 tape, you know, so that you get good transfer
5 of the color and that type of stuff.

6 Q. Okay.

7 A. All kinds of ways to do it. But
8 the best is a pointer type device that -- that
9 leads. Then you can see in the video -- you'd
10 put a target on the Escape. You'd put a
11 pointer on the -- on the F-250. And in the
12 video you -- and it's scale, so when it
13 touches, you know -- and that's before anything
14 else touches. You know exactly the
15 orientation.

16 Q. Right. Well, item number three
17 you talk about Grimes, you know, he testified
18 he didn't put the centerline tape on. But you
19 did read Mr. Crosby's deposition, right, where
20 he described that it was on the center of the
21 vehicle?

22 A. Yes.

23 Q. And you have no reason to dispute

1 that the centerline tape was not on the
2 centerline of the test vehicle?

3 A. That's agreed.

4 Q. Okay. On the next pages, which is
5 bates 9401, the paragraph beginning on based on
6 Grimes's deposition, you make the point that in
7 your opinion that Mr. Grimes should have
8 crashed a lifted Escape -- a lifted truck into
9 an Escape in order to establish the speed of
10 the truck in the accident. Can you explain
11 that opinion? How could Mr. Grimes have
12 established the speed of the truck in the
13 accident by running a crash test with a lifted
14 F-250?

15 A. He gives -- this is -- he gives
16 his speed range of 43.9 to -- into the low 50s
17 based on potential for braking and whatnot. I
18 mean, it seems like he's uncertain about the
19 speed. If he doesn't know the speed, he ought
20 to establish his own speed.

21 Q. Okay. Well, that's -- I'll go
22 back to my question. But let's talk about
23 that. Do you recall in his deposition that he

1 stated that the extremes using the potential
2 braking at 0.5 seconds would be 43.9 at the
3 lowest end if you have assumed full braking
4 power at exactly 0.5 seconds. And then he had
5 a high-end range that would assume that you
6 didn't have full braking and you had braking
7 just minimal right before the impact, and it
8 just provided him a preliminary range depending
9 upon various hypothetical braking situations.
10 Is that a fair description of his testimony as
11 you understand it?

12 A. That's a good start for a
13 conversation. Yes, sir.

14 Q. Right. But we know -- and you
15 agree that -- and he even said he didn't
16 believe that braking occurred. And that he
17 believed that that accident occurred at 50 or
18 51 miles an hour, which is consistent with your
19 belief as to what the speed of the F-250 was at
20 the time of the impact. Is that correct?

21 A. I think so. There's a lot in it.
22 Can you make sure I've got it all?

23 Q. Sure. Well, we don't have a

1 dispute here. You used 51 miles per hour as
2 the impact speed in every one of your
3 simulations.

4 A. Uh-huh.

5 Q. Correct?

6 A. Yes.

7 Q. All right. And so you don't have
8 any criticism of his using 49.9 in the crash
9 test?

10 A. I actually -- based on his work,
11 yes. I'm looking -- I'm using 51 and getting
12 more crush. If -- if the -- if the vehicle was
13 really going 44, then I'm -- I'm using a worst
14 case scenario in my simulation. But if his
15 opinion is that the lifted truck -- that an
16 unlifted truck produces the same amount of
17 crush as a lifted truck -- or even more is
18 actually what his opinion is -- then he needs
19 to make sure he's got the speeds right.

20 See, because what if the -- what if
21 according to him the accident was 44 miles an
22 hour. And is it fair to really compare it to a
23 crash test that he ran at 49.9 miles an hour?

1 He is disadvantaging --

2 Q. And --

3 A. He --

4 Q. Oh, sorry.

5 A. He is disadvantaging the Escape by
6 a full five miles per hour. So that's what
7 this is saying here. If -- if his range was
8 43.9 to 49.9 or 43.9 to 50 or whatever it is,
9 he can't compare a 43.9 mile per accident to a
10 51 mile per hour crash test if he's doing -- if
11 he's trying to seek the equation -- the answer
12 he says he's trying to seek which is, as he
13 says, clearly I'm trying to seek to show that a
14 lifted vehicle doesn't provide more crush than
15 an unlifted vehicle. Well, we use 51 in the
16 simulation, which is conservatively high
17 because we know the driver was on the brakes.
18 I think 51 is probably a good number though.
19 But if his -- if his opinion is that it may
20 have been as slow as 44, then he needs to -- or
21 43.9 -- if he's --

22 Q. Did he ever give the opinion --

23 A. -- going to compare -- if he's

1 going to compare apples and apples, he just
2 ought to compare apples and apples.

3 Q. Did he ever give the opinion that
4 he thought the accident occurred at 44 miles
5 per hour?

6 A. Well, I thought he said the
7 accident may have been as low as 44 based on
8 one of his calculations. But you know, if I
9 misread that, I misread that.

10 Q. Okay. Well, back to my other
11 question, and that is about your statement that
12 he could have established the speed of the
13 truck in the accident by crashing a lifted
14 truck. So I don't understand that. How could
15 he establish the speed of the truck in the
16 accident by first testing a lifted truck?

17 A. Okay. Well, he's the one trying
18 to compare -- try to say that lifted versus
19 unlifted doesn't matter. The way to do that is
20 you do two tests at the same speed, lifted and
21 unlifted so you only have one variable that's
22 changing, and you can answer that question.
23 He -- he is comparing his crash test to the

1 accident under the belief that he's hitting
2 them at the same speed, which he -- the way I
3 read his work or looked at his work, he didn't
4 fully establish that.

5 Q. So he would not -- and again, if I
6 understand your answer, it's based upon your
7 assumption as to the purpose of his test. I'm
8 trying to figure out -- so he couldn't
9 establish the actual speed that the accident
10 truck was traveling by running any type of
11 test. He can't actually establish that speed?

12 A. Sure, he can. He can -- if he
13 wants to do a crash test with a lifted truck,
14 he can demonstrate at 51 miles an hour. He can
15 demonstrate that that matches the crash pulses
16 and everything and then he can lower the truck
17 and run the same impact again. And then he'll
18 have a direct comparison as long as he gets the
19 offset right.

20 Q. So you're saying that he should
21 have run the accident with a lifted truck at 51
22 miles per hour and then compared those results
23 to the black box data in the actual accident.

1 Is that what you're saying?

2 A. Well, he could have done that to
3 know the exact speed. But if he -- if he did
4 both at 51, both the lifted truck and the
5 unlifted truck and the only thing he varied was
6 the lift, then we would know the effect of the
7 lift. He says very clearly in his
8 deposition -- and I'm working off of memory
9 here. But it basically says, hey, I did this
10 to show that a lifted truck doesn't do any more
11 damage than an unlifted truck or whatever he
12 said; it doesn't have more crush or -- and so I
13 remember that quote in there. My words aren't
14 going to be right, but I'm really close.

15 So he's actually -- in order to do that,
16 he's got to -- in order to say that an unlifted
17 truck produces the same or more crush than a
18 lifted truck, he needs to make sure that he's
19 got the speed of the two trucks the same. And
20 I will point here that regardless of the
21 offset, he -- he didn't seem to do that.

22 Q. Wouldn't that same theory apply to
23 your simulation, in order for the simulation to

1 show whether -- or what the difference in crush
2 would be between the actual accident and your
3 simulation, you have to run them both at the
4 same speed?

5 A. Well, not necessarily because
6 we -- we -- we know the driver of the truck was
7 on his brakes at impact because I think we have
8 that indicated. So he's not going to speed up.
9 And when we ran our simulation, when we dropped
10 it, we weren't even close. In other words,
11 there was a big discrepancy there in the amount
12 of crush. So within the level of braking, all
13 that would do is -- if we reduce the speed
14 below 51, that would just reduce the amount of
15 crush. So it wouldn't change any of my
16 opinions. My opinions would be -- my opinions
17 are robust. But my opinions are different
18 slightly than his.

19 The way he's going about it, his opinion
20 is -- maybe we just ought to find it in his
21 depo. I wrote it down where he gives the
22 purpose of it was to show that an unlifted
23 truck has the -- that the lift doesn't increase

1 or decrease or doesn't change the crush on a
2 car. Well, to do that, he's -- he's got to
3 have both pieces of test data to do it. He's
4 only got one.

5 Q. And that's based upon your
6 interpretation or your quote of what he -- you
7 say he's trying to do?

8 A. Well, it's -- let me find the
9 quote. Yes. Yes, you're right. If you don't
10 want me to find it, I won't. But yes.

11 Q. I'm not asking you to find it.
12 I'm just saying your opinion is based upon that
13 interpretation of the purpose of the test?

14 A. It's based on what he said, yes.
15 I -- yes.

16 Q. And I think this relates to this
17 opinion. And I want to make sure that I
18 understand it. The reason that you didn't do
19 what you're saying he should have done, which
20 is run an HVE simulation of the actual accident
21 to compare it to the black box data is because
22 you don't believe HVE is robust enough to
23 properly model if it's not a bumper-to-bumper,

1 structure-to-structure accident.

2 A. Okay.

3 Q. Is that fair?

4 A. I heard the last part of your
5 question. So I really understand it now. I
6 think what you're asking is -- ask it again
7 because I'm -- the first part was confusing,
8 and the last part I thought clarified it.
9 Please ask it again.

10 Q. Okay. Sure. The -- you're saying
11 that one way that he could compare apples to
12 apples is to first run a lifted test and
13 compare the delta-V's and the crush or whatever
14 to the actual accident. And it would tell him
15 whether he's got the speed right to compare it
16 to the real accident. Is that -- is that --
17 that would be one thing you would benefit from
18 by running an actual crash test with a lifted
19 vehicle in the same configuration as the actual
20 crash. Right?

21 A. Well, you're putting me in an
22 equation and the use -- I'm using his file. He
23 calculated 43.9. If his -- if the potential

1 accident speed is as low as 44 in his work and
2 then he's going to go crash it at 49.9, then
3 that's -- then that's not reasonable. That's
4 his work. Not mine.

5 Q. I'm just -- I'm not going into
6 that.

7 A. Okay.

8 Q. I'm saying that you're critical of
9 him for not running first a crash with a lifted
10 truck. Right?

11 A. The way he opines, yes.

12 Q. Right. And you also didn't run a
13 simulation with a lifted truck in it. Right?
14 You've never run a simulation with a lifted
15 truck. Correct?

16 A. That's correct. That's correct.

17 Q. And I would think there's two
18 reasons. One would be that you don't need it
19 because you used 51, which is kind of like the
20 maximum speed in your opinion. So you don't
21 need to determine the actual speed because
22 that's worst case scenario or the most
23 conservative approach?

1 A. Yes. That's one of the things.

2 Q. Right. And another reason would
3 be -- I want to make sure I understand it -- is
4 that HVE would not be appropriate for a lifted
5 accident because HVE is designed to study
6 bumper-to-bumper, structure-to-structure type
7 incidents. And that would be another reason
8 why you wouldn't use HVE to simulate the actual
9 accident?

10 A. It means you'd have to do some
11 more work. It doesn't -- I think that there's
12 justification for trying to use it. But it
13 would be -- it would be -- you would have to
14 start that whole process and do that. And you
15 know, that would -- that would be a -- I don't
16 know what the value would show anyways. I
17 don't know what the value would show because we
18 have the -- we have the accident. But I don't
19 know -- I don't know that we could use HVE for
20 that, for the subject accident the way it was
21 hit.

22 We can use it to study a frame -- a bumper
23 level hit. But you would have to do a lot of

1 work to see if you wanted to or could simulate
2 the actual accident because of the difference
3 in elevations. But there's papers out there
4 that says it's -- you know, that -- that it
5 could be done for that. But it's just -- it
6 wouldn't be -- I wouldn't use the stock stuff
7 out of the -- the default stuff out of the
8 program.

9 Q. And you can't cite to me any of
10 those papers that say it would be appropriate
11 to use in a lifted truck situation as we sit
12 here today?

13 A. No. I'm saying I think he said
14 you could do it. But you couldn't do it in the
15 stock condition. You would have to -- I mean,
16 stock meaning the default conditions. You
17 would have to start manipulating the program to
18 make it perfect. And we didn't -- you know,
19 that's a whole new problem.

20 Q. Right. But you can't cite to any
21 of those papers that say that?

22 A. No. That's knowledge I have in
23 my -- in my past.

1 Q. Yeah.

2 A. But no, I didn't bring those
3 papers.

4 Q. All right. Do you know what type
5 of modifications you would have to make in
6 order to run -- modifications from the stock
7 vehicles in order to run that type of
8 simulation in HVE?

9 A. I used the word stock. That was
10 my mistake. Default. Yeah, you're now --
11 you're -- that would take some real work to do.

12 Q. Right.

13 A. But I don't -- you know, as I sit
14 here, I'm not -- I'm not saying you can do it.
15 I'm not saying absolutely the papers say you
16 can do it. I'm saying I think there's papers
17 out there that indicate it can be done. But it
18 would not -- it would be -- it would be quite
19 an effort.

20 Q. Would -- do you -- would you know
21 how to do it?

22 A. I'm actually sure that if it could
23 be done, I could. But I'm not -- I don't know

1 that it can be done. I mean, in other words,
2 it's not -- it's just a -- it's just a physics
3 problem. But I don't know -- I mean, I think
4 I'm -- but that work hasn't been done, just
5 like the other thing you asked me about. I
6 can't even talk about starting it right now.

7 Q. Yeah. I'm not talking about
8 how -- I'm just saying do you know how to do it
9 without having to --

10 A. Well, it hasn't -- it hasn't been
11 done yet. So I can't say I know how to do it.

12 Q. Okay. Would it involve modifying
13 the stiffness coefficient for the different
14 areas of the rear of the Escape, meaning you'd
15 have to input a different stiffness coefficient
16 for the rear hatch versus the window versus the
17 bumper? Is that kind of the process it would
18 take?

19 A. I don't know. I'd have to -- I
20 haven't done it yet.

21 Q. All right.

22 THE WITNESS: I do hate to ask,
23 but I need to run down the hall and run back.

1 You don't --

2 MR. HILL: Oh, no problem. We can
3 take a break at any time.

4 THE WITNESS: Okay. I apologize.

5 MR. HILL: We're getting through
6 it now. We're -- we're on the same page now.
7 We're doing better.

8 THE WITNESS: Okay. I agree.

9 THE VIDEOGRAPHER: The time is
10 1:57 p.m. We are off the video record.

11 (A break was taken.)

12 THE VIDEOGRAPHER: The time is
13 2:07 p.m. We are back on the video record.

14 Q. (Mr. Hill) All right. Moving
15 ahead to the offset portion of your -- what did
16 you call it again -- rebuttal report. All
17 right. So that I can understand this, you
18 indicate that you used three methods to
19 determine the offset in the crash. Two of them
20 are based upon the Ford logo imprints, and one
21 of them is based on the crash testing. Is that
22 fair? Is that correct?

23 A. Those are the three methods that

1 we did independent of Grimes's work. Grimes
2 actually has work that shows the offset as
3 well. It doesn't require any rebuttal. It
4 just requires showing it. So yes, as far as
5 our work, that's what this shows.

6 Q. And I was just reading straight
7 from the paragraphs here that begins with of
8 the three methods.

9 A. Yeah.

10 Q. Yeah.

11 A. I'm clarifying to make sure that
12 everything is understood.

13 Q. Right. And the first method
14 involves producing a photomodel of the test
15 vehicle and the accident vehicle, using a photo
16 where the logo imprint is visible. And then
17 you show in figure 3A a crash test photo of --
18 with a yellow line around the logo area -- the
19 logo imprint area. Is that fair?

20 A. Yes.

21 Q. And while Ms. Cannella was
22 mentioning exhibits, I would like to attach --
23 and I should have done this at the beginning --

1 as I think Exhibit 2 this June 14, 2024
2 rebuttal report.

3 All right. And then figure 3B is from Jeff
4 Kidd's inspection after the incident where
5 again you've sort of outlined what you believe
6 shows the logo imprint from the Ford logo on
7 the F-250?

8 (Defendant's Exhibit Number 2
9 is marked for identification.)

10 A. Yes.

11 Q. All right. And figure four is
12 where you used photomodels where you -- and
13 correct me if I'm wrong. You indicate a point
14 on the photo, and then the PhotoModeler uses
15 its magic to determine a 3D distance between
16 those two points?

17 A. Yes.

18 Q. Okay. And so the distance it
19 calculates depends upon the start and endpoints
20 that you indicate on the photo?

21 A. Right.

22 Q. Okay. And figure 5B, same thing,
23 that's PhotoModeler Premium showing the

1 distance between the two points that you marked
2 on the test Escape.

3 A. Yes.

4 Q. Is that correct?

5 A. Yes.

6 Q. And again, that's figure, you
7 know, 5A and 5B showing those distances on the
8 subject Escape and the crash Escape. Those
9 measurements are dependent upon the points you
10 indicate you want the software to measure to
11 and from?

12 A. Correct.

13 Q. Okay. Now, the Ford logo on the
14 F-250, you would agree, was not the first part
15 of the F-250 to impact the Escape in the
16 subject accident?

17 A. I do. It was really, really -- it
18 was really, really close though because, you
19 know --

20 Q. Yeah.

21 A. -- it was definitely not the first
22 point of contact.

23 Q. I agree. But the bumper or the

1 tow hooks, there are other items that stuck out
2 farther than the logo on the front rail?

3 A. Forgive me. I was answering with
4 respect to the accident. You may have asked
5 about the test. I -- I don't know. I mean --

6 Q. I started with the accident. But
7 wouldn't the same thing be true of the crash
8 test?

9 A. Well, the crash test is a little
10 further because you've actually got bumper to
11 bumper.

12 Q. Right.

13 A. But in the accident -- in the
14 accident you're -- I mean, you're not hitting
15 bumper to bumper, so the logo is -- is, you
16 know, twice as close -- let's put it that
17 way -- as in the test. Thanks.

18 Q. Right. But either way though,
19 it's -- the logo is not the first thing to
20 impact the Escape?

21 A. Yes.

22 Q. That's all I was trying to
23 establish.

1 A. Right.

2 Q. And the logo itself is -- is not
3 flat. Do you agree with that?

4 A. Yeah. It's got a little convex to
5 it.

6 Q. Right. It's a little -- right.
7 So the -- like the center of the logo is going
8 to stick out a little bit more than the edges?

9 A. Correct.

10 Q. Right. And so if you look at --
11 I'll use one of your photos here if I can find
12 one that's clear. I don't seem to have a large
13 picture.

14 A. We do. There you go.

15 Q. This is the logo on the Escape,
16 which you agree is a different size than the
17 logo on the F-250?

18 A. It is.

19 Q. But it has the similar concave
20 shape -- or convex shape you just mentioned.
21 Right?

22 A. Yes, sir.

23 Q. And so you would agree that the O

1 and the R in Ford are -- I'm not making you --
2 asking you to be exact. But they're towards
3 the middle of the logo?

4 A. Yes.

5 Q. And so they would be sticking out
6 more than the edges of the logo?

7 A. At first contact, yes.

8 Q. Yes. Sure. All right. Basically
9 the closer you get to the center of the logo,
10 the more convex the logo is. Is that true?

11 A. I think I know what you mean.
12 Yes.

13 Q. Okay. All right. Let me stop
14 sharing for a second and see if I can find
15 something here.

16 MR. HILL: Okay. We need to take
17 like a one-minute break. Don't leave your
18 seat. I just -- I'm having some technical
19 difficulties accepting my files. Can we just
20 go off the record for -- it won't take more
21 than a minute.

22 THE WITNESS: That will work.

23 THE VIDEOGRAPHER: The time is

1 2:15 p.m. We're off the video record.

2 (A break was taken.)

3 THE VIDEOGRAPHER: The time is

4 2:18 p.m. We're back on the video record.

5 Q. (Mr. Hill) All right. I have up
6 on the screen here the photograph that's on
7 page 9404 of your rebuttal report. And it is a
8 photograph of the test Escape after the test.
9 Correct?

10 A. Yes, sir.

11 Q. And can you see on this photo, can
12 you point out where the imprint of the D is
13 from the Ford logo?

14 A. I don't know that I -- it would be
15 on the left side if it was there. I'm not a
16 hundred percent sure it's there.

17 Q. So in analyzing this logo, you
18 didn't look for or notice the imprints of the
19 letters from the word Ford on -- on the Escape?

20 A. Well, no. There are some. But I
21 don't know that the D showed up looking at it
22 on that particular slide. Let me see.

23 Q. Did you, in reviewing any of the

1 photos of the crash test Escape, locate the --
2 the location of any of the letters in the word
3 Ford as part of your analysis?

4 A. A is always the easiest to find.

5 Q. The what? I'm sorry.

6 A. The A is the easiest to see
7 because it's got a little tail on it. So the
8 D -- the D is kind of off on the edge. The A
9 sticks out. The A and the R stick out the
10 furthest. But we have a -- part of what I sent
11 you was an overlay of the Ford emblem on top of
12 this.

13 Q. I'm confused about the A. What --
14 do you mean the O?

15 A. Yeah. I'm sorry. The O, it's got
16 a tail on it like an A. I apologize.

17 Q. All right.

18 A. I'm an engineer -- I'm an engineer
19 looking at a letter backwards. But the way
20 they wrote it, it looks like a cursive A.
21 Excuse me.

22 Q. Right.

23 A. Fixing it...

1 Q. Did you use the cursive A (sic) to
2 overlay the logo on the crash test Escape?

3 MS. CANNELLA: Objection. Can we
4 be -- can we not use the cursive A since there
5 is no cursive A? Are we talking about the O or
6 the D? What are we talking about?

7 MR. HILL: I'm talking about the
8 O, the R, the D, any of the letters.

9 MS. CANNELLA: Yeah.

10 A. It's in the -- in the PowerPoint
11 we sent, there's an overlay on top of it that
12 we sent. But if you'll go back to that image,
13 it was just -- you're doing -- the image we had
14 up, the left edge is very visible. And so we
15 used the left edge of the emblem over there
16 because you can see where it comes to a point
17 at the edge of the oval. And so we were able
18 to measure to that point between the crash test
19 vehicle and the accident vehicle because the
20 letters are a little smeared and somebody might
21 have a different interpretation as to what
22 letter is what letter. But yes, I have
23 overlaid them, and I have looked at them. And

1 it's in my PowerPoint.

2 Q. Let me see here. I've found what
3 I think you were talking about.

4 A. All right.

5 Q. This is from your PowerPoint,
6 which we'll -- I'll go back up. We'll mark
7 this as Exhibit 3. This is the PowerPoint you
8 were referencing with the crash test offset?

9 (Defendant's Exhibit Number 3
10 is marked for identification.)

11 A. Yes.

12 Q. All right. And so if you could go
13 down here, here are photographs of the back of
14 the subject Escape and the crash test Escape.
15 And I think what you're saying here is that in
16 analyzing the position of the crash test Escape
17 logo imprint that you used what you perceive as
18 the edge of the logo, you didn't reference any
19 imprints on the letters in the word Ford?

20 A. Right. But we did provide visual
21 aid so people could understand it.

22 Q. Right. And I'm going to go down
23 to that.

1 A. Okay.

2 Q. But is it your testimony that in
3 this photo right here, that you're not able to
4 see the image of any of the letters in the word
5 Ford?

6 A. No. You can see the O and the R.
7 You know, we know where the D is, but I can't
8 say we can see the D. But the O is the best
9 one.

10 Q. Can you in some way -- if I give
11 you the screen, can you point to where you can
12 see the O on this image that I have up on the
13 screen?

14 A. Yes. I can tell you where it is.

15 Q. All right.

16 A. If you see the Escape emblem at
17 the bottom --

18 Q. Uh-huh.

19 A. -- the Escape XLT, from the right
20 side of the Escape emblem, come straight up and
21 you run into -- keep coming up a little bit
22 higher, a little higher and go left some.
23 Right there. You're -- you're covering the

1 part of the O with your hand right now.

2 Q. Okay.

3 MR. HILL: Do y'all know how to
4 write on this?

5 A. Yeah. But it won't come off my
6 computer screen. I'm sorry. That was a joke.
7 I'm sorry. Jokes don't come off. I don't know
8 how to write on that.

9 MR. HILL: Tedra, do you know how
10 to mark on this? I guess not.

11 Q. All right. But anyways --

12 A. Hey, if you go down in the
13 slide --

14 Q. Right.

15 A. -- a few slides, it will -- it
16 will show an overlay, I believe. It's above
17 that.

18 Q. All right. Well, let's look at
19 this picture here. This is on page 9459. And
20 this shows you indicating that your belief that
21 the Ford logo edge is over here at the far left
22 of the pink line above the edge of the S in
23 Escape?

1 A. Correct.

2 Q. And that's the reference point you
3 used to determine where the logo impacted the
4 crash Escape?

5 A. For this particular method, yes.

6 Q. Right. And so your reference
7 point is not from any of the letters; it's from
8 what you believe to be the edge?

9 A. Yes.

10 Q. Okay. And there's what you're
11 talking about as your overlay?

12 A. Right.

13 Q. Right?

14 A. It needs -- it needs to be tweaked
15 a little bit. But it's just for visual
16 explanation, yes.

17 Q. Right. And again, you're not
18 matching up the letters here. You're matching
19 up the logo with what you believe to be the
20 mark from the far left edge?

21 A. Right.

22 Q. Right. And at no time did you use
23 the imprints of the word Ford as your reference

1 point?

2 A. No. We always use the center of
3 the logo or the edge of the logo.

4 Q. Right. But you couldn't
5 compare -- you don't know where the center of
6 the logo is in this instance. Correct?

7 A. Well, in this one, no. But in
8 others, we do. But yeah, in this one, no. So
9 that's why we use the edge because we know
10 where the edge is of that logo. And of the
11 Escape logo, we know where the center is.

12 Q. Right. And so when you say in
13 this one, you mean in this case. Like you
14 don't -- you didn't use the center of the logo
15 at all in this case. You just used what you
16 believe to be the left edge?

17 A. In Grimes's work that he provided
18 in his file, you can see the center of the
19 logo. We use the center of the logo versus the
20 center of the logo on his. But when we were
21 using the stamp marks, we went to the edge of
22 the stamp because that's what we thought was
23 the most reliable for comparison purposes.

1 Q. Well, the difference from the end
2 of the D in the word Ford and the edge of the
3 logo is a known distance. Right? I mean,
4 that's something that can be measured. Do you
5 agree with that?

6 A. Not in this photo because you
7 can't -- don't really know where the D is.

8 Q. All right. So but I'm saying in
9 general, you could measure -- we know the
10 distance between a point on the D and the edge
11 of the logo. That could be measured?

12 A. If you're just asking can somebody
13 take a logo and measure the distances on the
14 logo itself, absolutely. A hundred percent.

15 Q. Right. Right. And so you didn't
16 attempt to measure what you believed to be the
17 edge of the logo in connection with any of the
18 imprints of the letter Ford. Did you -- did
19 you undertake an effort to verify whether this
20 edge is the proper distance from any of the
21 letter imprints that you may or may not be able
22 to see on the Escape?

23 A. Nothing -- no. Nothing more than

1 the overlay we showed you a minute ago just to
2 give perspective. No, sir.

3 Q. All right. But the overlay was
4 based on your belief of the location of the
5 edge, not the location of any of the letters.
6 Right?

7 A. Well, you -- you keep using the
8 edge. And I heard that a long time ago, and I
9 thought what does he really mean by edge.
10 There's some marks on the outside of the logo
11 that are in an oval.

12 Q. Right.

13 A. We're using that mark there as if
14 it's the edge. If it's really not on the edge,
15 then the measurement gets a little bit bigger
16 than what we get. So we're trying to do
17 something that's conservative. And we're
18 trying to do something that's repeatable and
19 something that's not up to interpretation as to
20 what letter you're looking at.

21 We think that that green arc up there can
22 only be the edge or something inboard of the
23 edge of the logo. So that's what we used

1 because we think it's reproducible, repeatable,
2 and really doesn't -- you know, isn't subject
3 to interpretation. If someone wants to use the
4 letters, that's fine. We didn't use the
5 letters though.

6 Q. And that's all I'm trying to
7 establish is that all of your measurements are
8 dependent upon this green arc here being the
9 edge or slightly inside the edge of the logo?

10 A. Thank you. Yes, sir.

11 Q. Okay. And the same I guess --
12 here's a picture of the accident Escape. And
13 you have red markings here. This is 9454.
14 Explain -- you've got what appears to be a
15 similar mark on what would be the edge of the
16 logo. But then you also have some marks that
17 it looks like would be the letters of the logo.
18 Is that right? Or what do the lines represent
19 on this page?

20 A. Well, I think that the F and the O
21 are visible, the swoop to the F and then the
22 bottom of the O. So the -- we just did it
23 different ways. Here we added those. I think

1 there's an overlay of that logo somewhere else
2 in this same PowerPoint. But there we are
3 marking some letters. But we're still not
4 using those letters other than for our
5 understanding.

6 Q. Okay. So even in this instance,
7 you didn't use the letters to perform the
8 overlay. You used the markings of what you
9 perceive are the edge of the logo?

10 A. Right. You've actually presented
11 my PowerPoint, not in the order we did it. We
12 started with something to help everyone
13 visualize the logo on the blue vehicle, and
14 then we ended with the silver vehicle -- or the
15 gold vehicle, whichever one it is. So yeah,
16 that's all we're doing is we're trying to give
17 context so that people can see that that is a
18 Ford logo stamp mark for that, for those images
19 you're showing. And then later on we show the
20 measurements.

21 Q. Right. All right. I didn't mean
22 to take it out of order. I'm just trying to
23 understand it and make sure I understand the

1 reference point. And in both cases the
2 reference point is, based on this overlay, what
3 is perceived as the edge or just inside the
4 edge of the logo?

5 A. Yes. For those measurements.

6 Q. All right. And they're not
7 dependent upon the imprint of the letters?

8 A. Correct. For that -- for those
9 measurements.

10 Q. Okay. All right. My screen froze
11 again.

12 MR. HILL: Can y'all -- I hate to
13 do this, but can y'all give me like a
14 five-minute break so I can -- if I can get this
15 fixed, then I won't hold it up, and it will go
16 much faster.

17 THE VIDEOGRAPHER: The time is
18 2:33 p.m. We're off the video record.

19 (A break was taken.)

20 THE VIDEOGRAPHER: The time is
21 2:56 p.m. We are back on video record.

22 Q. (Mr. Hill) All right. I'm going
23 to begin to share my screen. And I hope it

1 doesn't cause everything to crash.

2 All right. Can you see that this is from
3 your rebuttal report, figure 3A on the screen?

4 A. Yes.

5 Q. Okay. Great. And we're talking
6 about this marking here above the E that you
7 believe is the O in Ford. Is that correct?

8 A. No. I was talking about the one
9 just above that.

10 Q. Where?

11 A. Right there. Left a little.

12 Right there.

13 Q. Right there (indicating)?

14 A. That is an O in Ford, yes.

15 Q. Okay. And if someone were to have
16 the opinion that that is the curve in the D --
17 you can see the shape of the D right here --

18 A. Right.

19 Q. -- not the O, that would change
20 the location of the overlay of the logo.
21 Correct?

22 A. If someone has a different opinion
23 of a different impact point, it would change

1 the overlay, yes. But there's a lot of reasons
2 why that's not true.

3 Q. All right. And what are the
4 reasons that that is not the D and has to be
5 the O?

6 A. Well, you see the -- to the left
7 over there you have the edge that we've already
8 talked about. But in the lower right, you can
9 see the tow hook, which is the first thing to
10 hit. And it's under -- it's -- it's -- we --
11 we deal with that in a minute in the PowerPoint
12 where the tow hook has also been shifted left
13 considerably. So I mean, that -- that's why
14 you don't use the letters because there can be
15 different interpretations with the curves.
16 They're all curves. But it wouldn't fit with
17 the rest of the damage on the vehicle if that
18 were true. So you can have the opinion. It
19 will change it if you move it, but it won't
20 change my opinion because I think there's too
21 many other factors.

22 Q. Have you determined or measured
23 the distance from the edge here that you say,

1 the edge of the logo, to where you say the tow
2 hook is to verify whether that's the proper
3 distance between the tow hook and the edge of
4 the logo?

5 A. Yeah. I did look at that, yes.
6 Not so much in distance, but Grimes did this --
7 Grimes lined up the tow hook in that hole there
8 and he got the Escape logo to hit where I'm
9 saying it hit and not where you said it just
10 hit. That's in -- that's in his file. I don't
11 know if he knows it's in his file, but it's in
12 his file. I looked at his work that's in his
13 file that -- that shows where it matched.

14 Q. What specifically in his file
15 matches the overlay of the logo from the Ford
16 with where you say the left edge of the logo
17 hit? What specifically in his file matches
18 that?

19 A. He's got a scan of the two
20 vehicles that he -- it looks like he colorized
21 and -- and made 3D models of a mesh, and
22 then -- we'll just call it a scan, a 3D point
23 cloud of the two vehicles fit together at

1 maximum engagement. And they're -- they're fit
2 together at maximum engagement with 16 inches
3 between the Ford logo on the Escape and the
4 Ford logo on the front of the truck. That's it
5 the only place he actually shows those logos
6 and things. And they match exactly what I'm
7 showing you here with our work. Remember we
8 had four to six inches with -- with a probable
9 five. He just gives it, you know, five exactly
10 in his work. And I have a PowerPoint of that
11 in this folder.

12 Q. All right. Is that part of this
13 report or is that separate?

14 A. It's not part of the report
15 just -- because it's just -- it's just using
16 his work. Before we could use his work, we --
17 we did all of our work independently from the
18 raw data that happens to match his data. So
19 it's the five inches that I gave as my opinion
20 as -- as a composite of his file and my file,
21 and -- and the models that we built from his
22 file.

23 Q. All right. Looking now at page --

1 and we'll get to that in a second -- 9406
2 figure 5B, the left side photograph is the
3 crash test Escape after the test obviously.
4 Correct?

5 A. Yes.

6 Q. And did you notice that the Ford
7 emblem on the Escape is not lined up with the
8 center line tape on the roof of the vehicle?

9 A. Well, that's the beauty of it is
10 the -- before the vehicle crushed to where it
11 is now, the two logos already hit. In other
12 words, the logos are hitting very quickly and
13 they're comparative. From the two crashes
14 whatever -- you know, they -- they hit and the
15 logos left their stamp marks. So if the test
16 is actually representative of the accident,
17 then of course the -- the logo should be in the
18 same place except for vertically. But they're
19 not. They're off vertically, you know, and
20 laterally.

21 Q. Well, the -- the actual crash you
22 have a different endpoint -- impact point
23 vertically on the Escape. So I don't

1 understand your -- your point. You're --
2 you're going to have a different crush pattern
3 between the subject accident and the crash test
4 regardless because they're impacting at
5 different points on the back of the Escape.

6 A. Well, that's the point. You can
7 see the change of height, you know, which we
8 all know is supposed to be there. But there
9 should be alignment -- the logo should be in
10 the same place, and it's -- it's way off. I
11 mean, because this is one of the earliest
12 things that contacted. And this truck is, you
13 know, how many thousand pounds. You can't get
14 this truck to move over in that amount of time.
15 You're talking almost -- we're talking about 75
16 feet per second. You're talking about moving a
17 foot. You're talking about a 75th of a second
18 until this thing hits. You know, as an
19 approximation, you know, that's -- that's
20 before -- I mean, that's -- that's a very small
21 amount of time to do that, 75, 1 over X, that's
22 a hundredth of a second approximately if you
23 round it. And we're -- so we're usually

1 looking at crashes that are a 150 milliseconds
2 or 1.5 hundredths. So that's a big difference.

3 If -- one is called a bullet and one is
4 called a target. The bullet vehicle is -- is
5 going to crush in and align on a path that the
6 front logo is not. It's going to be very
7 representative when it hits. And -- and both
8 experts said they used a crush pattern to
9 determine the impact pattern. And -- and
10 grimes got 10.9 and I got 11. So we're off by
11 a tenth of an inch. But the -- the logo is
12 going to be part of that match that he's using.

13 In other words, he can't -- he can't somehow
14 say -- none of us can say that, oh, you know,
15 these -- we're going to use these parts at
16 maximum engagement to determine first contact,
17 but we're not going to use these parts. We're
18 going to say these parts didn't follow the same
19 physics. I didn't expect this argument. But
20 the bottom line is, that logo imprint, there's
21 only one in both of them -- or one very
22 specific spot. It has to represent impact
23 because that logo is going to hit before your

1 crush happens to any great extent.

2 Q. Right. And I -- I wasn't talking
3 about the striking bullet vehicle's logo. I
4 was talking about the logo on the Escape.

5 A. Right. But they're relative to
6 each other. The relative position -- we don't
7 mind it moving eventually. I mean, look at
8 where the bumper on the truck -- on the car is.
9 We're using -- in fact, Grimes said he used the
10 tow hook location mark to put the vehicles
11 together at -- at impact. Well, that tow hook
12 mark is, you know, three feet forward of where
13 the bumper started, but he's still using that
14 as his mark. That's the way it's done because
15 physics dictates that the crush will be along
16 the line of force. And then we can look at
17 where the contact is and then un-crush the
18 vehicles and use that contact.

19 Q. Right. But this is what I was
20 trying to get at.

21 A. Sure.

22 Q. Are you -- are you saying that
23 because the logo on the Escape in the crash

1 test after the test is not aligned with the
2 center line of the roof of the Escape, that
3 that is somehow evidence that the vehicle
4 offset was -- was improper?

5 A. No, I'm not -- forgive me. I was
6 accepting your premise as true in trying to
7 answer the questions. Just because you're
8 looking at a photo that's taken here, it
9 doesn't mean that those things aren't lined up.
10 They're not in plane with each other, so the
11 perspective of the photo may be what's causing
12 it. That was a mistake on my part. We
13 haven't -- we haven't established that logo --
14 that that logo isn't lined up with the accident
15 of the vehicle. It just looks that way because
16 it just might be the perspective of the photo.

17 Q. Okay. Well, that's what I was
18 trying to get. That's not the basis of your
19 offset argument --

20 A. No.

21 Q. -- your offset argument is limited
22 to the location of the left edge of the logo
23 imprint on the Escape and then the tow hook

1 impact that you interpret?

2 A. Yes. They both -- those are
3 the -- those are the two strongest indicators
4 is the tow hook impact and the logo impact,
5 they're the simplest to see and understand,
6 although there is other crush profiles and
7 things that could be used, those are the ones
8 that are, you know, rock solid if you choose to
9 use them, and those are the ones that I used.

10 Q. Gotcha. And then you add the
11 overhead photograph as your third method. And
12 I just want to make sure I understand all of
13 the methods that you used to calculate the
14 offset in the crash test.

15 A. Yeah.

16 Q. Would those be the main three?
17 The location of the tow hook impact, the left
18 edge of the logo imprint, and then the overhead
19 video. Does that cover the gamut of what
20 you're relying upon to establish the offsetting
21 in the crash test?

22 A. Logo, tow hook, overhead, yes.

23 Q. Okay. That's -- that's all I'm

1 getting at with this. All right. This is
2 figure 6 on page 9407. And this is in
3 reference to what I believe you described as
4 your third method on page 9406 at the top-down
5 crash test video and frames.

6 A. Yes.

7 Q. Right. And then you are using
8 this still photograph from the crash test video
9 to analyze the offset based upon this topdown
10 view?

11 A. Yes.

12 Q. All right. And kind of explain
13 for me, if you can, what the different lines
14 that you've added to this still represent.
15 There's green lines and there's a red dash.
16 What do those represent?

17 A. The green line is a projection of
18 a center line of the roof of the F-250. The
19 red line is a projection of the hood of the
20 F-250 so that we get a range of offset between
21 the center line of the Escape, which we can use
22 one line that goes through the hood and the
23 roof of the Escape. So those are about 1.42

1 from the center of the Escape over and 1.25 to
2 get a range. So that's going to be plus or
3 minus 16 inches, something like that.

4 Q. And that's 1.42 feet?

5 A. Yes.

6 Q. And 1.25 feet?

7 A. Yes.

8 Q. And how did you conduct those
9 measurements between the lines?

10 A. Well, the 5.92 is the width of the
11 Escape. So we can calibrate the image
12 approximately and make measurements on it by
13 knowing a known width. And then we can try to
14 measure other objects in the -- in the image.

15 Q. So that 1.42 and 1.25 depend upon
16 your reference of the overall width of the
17 Escape?

18 A. Partially, yes. Yes.

19 Q. All right. And does this account
20 in any way for the parallax in this photograph?

21 A. That's why we're giving it a
22 range. Clearly, you know, according to Crosby
23 the test was not set up to allow measurements

1 from the photo. So we're disadvantaged. It
2 could have been. It didn't even get the camera
3 directly over the rail according to him. But
4 you know, within reason -- within range, we --
5 based on the other work, this is consistent
6 with the other work. And we believe it's --
7 it's clearly demonstrates, you know, that the
8 offset is approximately five inches plus or
9 minus as the report says.

10 Q. Do you know the height off the
11 ground of the roof of the F-250?

12 A. It's in the specs, yes. I don't
13 know off the top of my head. But it's a little
14 over six feet probably.

15 Q. All right. And do you know the
16 height of the hood of the F-250?

17 A. It's in the specs. I don't know
18 it exactly, no, sir.

19 Q. All right. And do you know the
20 height of -- you see on this photograph there's
21 a hinge right here and right (indicating) here
22 for the rear window of the Escape? Do you see
23 those hinges?

1 A. I don't know as I sit here, no.

2 Q. You don't know if there's hinges
3 on the Escape?

4 A. I don't know the height of it, but
5 I do see the hinges.

6 Q. Right. And so you don't know the
7 height of the hinges?

8 A. Not as I sit here, no.

9 Q. Okay. And you didn't factor in
10 any of those heights in analyzing the photo
11 parallax here with this --

12 A. Of course I did. I used -- I used
13 something that was higher than the roof of the
14 Escape and something that was lower than the
15 roof of the Escape to get a range. We know
16 that the roof of the Escape is above the hood
17 of the F-250. But the roof of the Escape is
18 below the roof of the F-250.

19 Q. Right. So the impact -- the
20 center line impact then following that logic
21 would be somewhere between the red dotted line
22 and the green dotted line?

23 A. Yes.

1 Q. Okay. And you see that the
2 hinge --

3 A. Yeah. But you're not -- no.
4 You're -- for a measurement, that's what we're
5 using. You know, the -- the impact -- you may
6 be bringing in other things in that. But for
7 scaling, that's what we're doing. We need
8 something higher and lower. I'm not talking
9 about anything but the center lines of the
10 vehicles there because whatever problems there
11 are with these cameras, I know I can track the
12 center lines because he's got tape on it. The
13 rest of the things are different elevations.

14 Q. Right. Well, I'm just talking
15 about in reference to the center line.

16 A. Okay. That's what I'm talking
17 about.

18 Q. Right. You've got a green center
19 line that's higher than the Escape. You've got
20 a red center line that's lower. And so the
21 center line impact would be, according to your
22 analysis, somewhere between the red line and
23 the green one?

1 A. For the -- for the purposes of the
2 analysis, yes.

3 Q. Right. And do you see the hinge
4 there is between the red line and the green
5 line?

6 A. Well, I -- I can't see it. But --

7 Q. All right. Well, hold on a
8 second. Would it help if I pulled up the
9 actual video from the crash test, if I can do
10 that?

11 MS. CANNELLA: How is he suppose
12 to know if that helps or not? I object to the
13 question.

14 MR. HILL: I'm just saying --

15 Q. Okay. Can you see on the screen
16 now the video from the crash test?

17 A. Sure.

18 Q. All right. And so this is right
19 before impact. And if I take it to the point
20 of impact, all right, we now have, as you can
21 see, the center lines for the hood and the
22 roof. This is basically the same picture you
23 had except I don't know why yours was flipped

1 in the other direction. But can you see the
2 hinge clearly in this, the actual crash video?

3 A. I can.

4 Q. Okay. And you would agree that
5 the center line on the hood is to the front --
6 the inside edge of that hinge?

7 A. Yes.

8 Q. And then if you extrapolated the
9 hood, it's naturally due to photo parallax,
10 going to be lower because it's higher than the
11 Escape, and so it's going to impact somewhere
12 around the other edge of the hinge?

13 A. Close.

14 Q. Close. Right. So this is what I
15 was -- the point I was trying to make before is
16 that according to this analysis, using the
17 overhead, the center of the F-250 would be
18 somewhere between the right edge of that hinge
19 or the top edge and then somewhere along the
20 hinge. Correct?

21 A. Well, you're -- you're adding a
22 point that we -- the problem is you can -- you
23 can find a large number of points and do a

1 large number of analyses, and the cameras
2 weren't set up well to do that. We're using
3 this as best we can. And I'm not saying it's
4 relative to the hinge. I'm saying based on the
5 way we scale, the way we did it, you're looking
6 at the measurements I gave you.

7 What is true is the impact was -- was under
8 that hinge. The logo was under that hinge at
9 impact, and we know that. And so generally
10 speaking your analysis is good. But I'm -- you
11 know, I'm not saying it's to the level I think
12 you're trying to point out there. But I do
13 agree that the -- that the logo was below the
14 hinge at impact.

15 Q. Right. Do you know if distance
16 from the inside of this hinge to the center of
17 the Escape? Have you measured that?

18 A. I haven't. But it's going to be
19 close to 18 inches.

20 Q. Okay. And that's from the edge of
21 the hinge -- on this photograph, it would be
22 the -- let's use it from the perspective of the
23 F-250. So you're looking at it from the back.

1 It would be the right edge of the left hinge.
2 You're saying the distance from that -- sorry?

3 A. My report gives a spacing between
4 the hinges. And we can just take -- take half
5 of that. It's -- it's in the original FR26
6 report.

7 Q. Okay. And in order for your
8 analysis of the F-250 logo imprint to be
9 correct, you're saying the distance between the
10 hinge and the center of the Escape is 18
11 inches?

12 A. No. I was giving an estimate.
13 Let's -- let's open up a -- open up a -- we're
14 doing an analysis based on the center lines we
15 were provided. The hinge itself is where the
16 hinge itself. I'm not trying to measure the
17 hinge. I'm doing an offset between the dotted
18 center lines that he gave us. Okay? And it's
19 just a technique that we can use. It gives a
20 range. The hinges are however far the hinges
21 are. I'm not trying to estimate that. But
22 wherever they are, they are. And I know the
23 measurement because I've got it in my first

1 report. I just would have to take time to open
2 up the report if you want me to do it.

3 Q. But are you saying that you can't
4 use the hinge as a reference point to determine
5 the impact point of the F-250? I mean, it's --
6 it's no different than using the center lines.
7 It's just another reference point. Correct?

8 A. That's false.

9 Q. Okay. What's false about that?

10 A. Remember, Crosby has routinely
11 marked the impact point with markers. He has
12 routinely set up cameras to allow measurements
13 to be made. He did take photographs of his
14 intended impact quite accurately. But he did
15 not document the impact. In fact, his report
16 is false. When it shows the impact
17 orientation, we know it's wrong and that his
18 report is misleading. He gave an impact
19 location that is one hundred percent not
20 represented by his video. And he -- but he
21 reported it as an impact location. The only --
22 so we have limited tools because he left out
23 those tools. Apparently, at someone's

1 direction or because someone didn't ask him to
2 allow measurements to be made. I don't know
3 which one. You can read his depo and see which
4 one.

5 But what we're doing here is one -- I
6 wouldn't even know where the center lines of
7 the vehicles are if he didn't put the tape on,
8 I'd have to be estimating that. But he did --
9 Grimes didn't know the tape was on the center
10 line. Okay? In his deposition, he didn't know
11 it. Crosby confirms it's on the center line.
12 Thank you, Mr. Crosby. I appreciate having
13 something I can measure to. And so we are
14 using those center lines because it's what was
15 provided. You are now trying to do an analysis
16 based on hinge, which I have no problem doing.
17 The impact was under the hinge. The logo was
18 under the hinge. But we would do that looking
19 at the rear of the vehicle where we wouldn't
20 have depth problems and scaling problems.
21 The -- the problem is that Crosby didn't do it
22 in a way to facilitate this. So we -- we have
23 to find reasonably reliable ways. I'm not

1 going to profess to know where the hinge is
2 based off of this photo. I'm going to profess
3 to know where the hinge is because I can
4 measure the hinge. It's been documented and we
5 know where it is. I'm only able to use what --
6 because it wasn't properly documented, all
7 someone had to do was take a tape measurer and
8 hold it up where the logo imprint is and take a
9 photo of it. Crosby said he went out there and
10 looked at it and held a measure -- the tape up
11 to it and says it's offset by an inch, but he
12 didn't do it. So now I'm left using these
13 methods from my own independent analysis, and I
14 get five inches.

15 But remember, Grimes did do a point cloud
16 match when he got the same answer, and I have
17 that to show you. So that's his work that we
18 can also use. We don't even have to do this.
19 But when we did it to make sure of where it
20 was, we got five inches using these methods.
21 But I'm not here to measure a hinge this way.
22 This is not the right way to do it. We're only
23 stuck doing it this way because someone didn't

1 do it reasonably well in the crash test.

2 Q. Let's go back. Again, I'm
3 simply -- the question was, if you can measure
4 the center line that's referenced in this photo
5 that -- you're saying but you can't reliably
6 refer to the hinge in this photo. What's the
7 basis of that?

8 MS. CANNELLA: Asked and answered.

9 A. I didn't do it to measure the
10 hinges. I -- I used it to measure the distance
11 between the two yellow lines.

12 Q. Right.

13 A. That's why I did it. I don't like
14 the method. I -- I'm stuck with the method
15 because the cameras, you know, as Crosby went
16 through, the camera was -- was improperly
17 positioned. So it's an imperfect method. If I
18 know where something is, I'm going to measure
19 it in the proper way. If I don't know where it
20 is and I have to do this type work and do it
21 multiple ways, that's why we have a range of
22 four to six inches. There's some error
23 involved in this. So I'm -- the hinge, I know

1 where it is and I can measure it. And we can
2 look at the back of the car and tell the logo
3 mark is under the hinge just like what we see
4 right here. So if we know where the hinge is,
5 we can come down and know where the logo is.
6 But I don't need to estimate where the hinge
7 is. I know where the hinge is. It's the logo
8 mark I need.

9 Q. Right. But the logo mark is
10 dependent upon your conclusion that the left
11 edge of the logo mark is, indeed, a
12 representation of the left edge of the logo.
13 All of your opinions depend upon that being
14 accurate?

15 MS. CANNELLA: Object to the form
16 of the question. Misstates his testimony.

17 A. Well, the logo mark that I see
18 needs to be understood as a logo mark. You're
19 correct. But the tow hook mark needs to be
20 understood as a tow hook. And by the way,
21 Grimes -- excuse me, Crosby said that he didn't
22 put any marking tape or put any marks on there
23 so we could tell where the impact was. And

1 I've already told you that his report is
2 erroneous as to where the impact was. His
3 drawings are wrong. We do have one very small
4 fortunate piece of luck, and that is that the
5 tape that someone put on the tow hook to hold
6 the trigger or the light trigger on, that tape
7 did leave a white mark on the rear of the
8 Escape so we can actually use it. Obviously
9 Grimes doesn't know it, and Crosby doesn't know
10 it, but if you look at the photos, you can see
11 it. And then if we go to Grimes's own crush
12 match, we can measure 16 inches, just like I've
13 been telling you all along. There's -- there's
14 45 percent more offset, 16 inches logo to logo
15 that's in his work in his file. But he didn't
16 testify about it in his deposition and, in
17 fact, claimed that he hadn't done it.

18 Q. What is erroneous about Crosby's
19 report? What specifically did he put in there
20 that you say is an error?

21 A. Well, if you look at this image
22 right here -- well, if you back up the video
23 one frame, you'll see that the truck isn't

1 centered over the rail. And he shows it
2 centered over the rail. And then if you look
3 at where -- yeah, and then if you look at where
4 the impact is on the car, the impact is in a
5 different spot. That truck is not centered on
6 that rail.

7 Q. Well, he did not, in his report,
8 indicate anything about the location of the --
9 the F-250 at the time of impact. Correct?

10 A. Oh, of course he did. He drew it
11 and he stated it was centered over the rail.
12 It says it verbally -- it says it verbally on
13 page two or three or four and shows a diagram
14 on page three or four or five. And it's --
15 it's wrong. It is -- it is wrong. It is a
16 misstatement of what he did in his crash test.
17 And he knew it, and he left it in there.

18 Q. Well, he stated that the center
19 line was above the center of the truck at the
20 time the test was initiated?

21 A. No. Let's -- let's go back and
22 read it. Let's not argue. Let's just go --
23 let's go look at the diagram. That's the best

1 one. He actually has the rail labeled.

2 Q. Right. And all of those diagrams
3 are running the test. Correct?

4 A. He labels it impact. He labels it
5 impact.

6 Q. All right. What else do you claim
7 is erroneous about his report?

8 A. Well, let me -- let me show you
9 that first. I -- I want to show you here.
10 Okay. So it will take a minute. I don't know
11 where his report is. In fact, it's -- in fact,
12 I didn't include the report in what I sent you.
13 Can you pull it up and let's go to page three
14 or four? Just because I didn't want to resend
15 all of Grimes's stuff. You have it in his
16 stuff.

17 Q. You want Grimes's report or
18 Crosby's report.

19 A. Let's go with -- excuse me --
20 Crosby's. I didn't send it back to you, but in
21 his file something says report and on page five
22 he labels impact configuration and draws the
23 rail down the center of the vehicle, which is

1 false. And then --

2 Q. Let me see if I can find it.

3 A. Sure.

4 MS. CANNELLA: I believe we're
5 talking about the Exponent report?

6 THE WITNESS: Is that Crosby?

7 MS. CANNELLA: Yeah. He had a
8 letter report too.

9 THE WITNESS: Oh. I'm talking --

10 MS. CANNELLA: You're talking
11 about the crash test report?

12 THE WITNESS: Yeah. Yep.

13 A. So on page four he states it
14 verbally. On page five he does it with the
15 drawing. The drawing is the proper way to
16 communicate it clearly and he labels it impact.
17 He uses the words and gets the same inclusion,
18 and it's a misstatement of what happened.

19 Q. Okay. Here's page four of his
20 report.

21 A. All right. Last paragraph. And
22 it says in this orientation the front of the
23 F-250 struck the rear of the Escape. And

1 that's the third line from the bottom. In this
2 orientation the front of the F-250 struck the
3 rear of the Escape. And above that it
4 describes the orientation with -- it says the
5 F-250 was towed into the impact rolling
6 straight ahead with it's longitudinal center
7 line collinear with the center line of the
8 exponent crash rail. There's only one
9 interpretation of those two sentences. He
10 intended to have it collinear with the crash
11 rail, and it was collinear with the crash rail.
12 It was not. Although, I fully believe that was
13 his intent.

14 Q. Right. But that -- and that's the
15 entire basis of your argument that he has
16 testified that at impact the F-250 was exactly
17 collinear to the center line of the tape.
18 That's the entire basis of that opinion?

19 MS. CANNELLA: Object to the form
20 of the question.

21 Q. What you decided?

22 A. Yes. First, the report is wrong.
23 And then -- and the basis is the work I've

1 shown you and Grimes's work, which I need to
2 show you, and then the second page of this
3 gives the drawing, if you just flip to it,
4 which is page five, it shows it unequivocally
5 the offset is supposed to be 10.9. The vehicle
6 is supposed to be center line both of which are
7 false and this is labeled impact configuration.
8 And then there's one other page in this report
9 that was wrong. Just on this one topic.

10 Q. All right. Anything else that --

11 A. Well, we've kind of --

12 MS. CANNELLA: The basis of what?
13 Object to the form of the question.

14 MR. HILL: The basis of his
15 statement that Crosby's report was wrong.

16 A. Well, we're talking about just
17 with respect to the offset. If you go to
18 page 94 of the report, he reports to a tenth of
19 the inch the impact, which he's off by, you
20 know, five inches which is, you know, erroneous
21 to the reported impact, but it wasn't.

22 Q. And again, that's dependent upon
23 your evaluation of the -- where the logo impact

1 is on the Escape --

2 A. No. That's -- that's Grimes's. I
3 didn't need to show you Grimes's. I guess I
4 need to show you Grimes's. Grimes's own work
5 shows that. He doesn't -- he doesn't discuss
6 it in his depo. But let me just show you his
7 point cloud that has the vehicles center line
8 16 inches apart.

9 Q. All right. Did you produce that
10 with your files related to the -- your -- what
11 did you call it, rebuttal report?

12 A. No. No. That's his file. I --
13 that is his file.

14 Q. All right.

15 A. That's his cloud -- all I did is
16 view it the way I normally would viewing my own
17 work. I sat this morning and worked on cloud
18 for other things. I can view it. I can open
19 windows. I can close windows. Turn vehicles
20 on and turn vehicles off and I can show you how
21 -- what we did. I saved the viewing of it to
22 present to you today to make it easy. But I
23 can open up cloud compare if you want.

1 Q. Whatever you want to do to
2 illustrate the point. I didn't know if you
3 needed me to could open it or if you could open
4 it.

5 A. Sure. I can open it.

6 Q. All right.

7 A. Okay. So I'm going to share
8 screen. And that's going to work today.
9 Share. I'm going to open up a PowerPoint that
10 I -- I did so I didn't have to open up cloud
11 compare today because it's very hard to open up
12 on Zoom. And this is it.

13 So it's Grimes's offset. I added those
14 words. The rest of this is -- is his title
15 from his file, test MMC both vehicles. And the
16 first page here is an image of his file that he
17 gave me. So it's in the testing folder. Open
18 up the testing folder, page two, it's in the
19 point clouds. In the point clouds, this is his
20 cloud compare file and it's titled test MMC
21 both vehicles. And all I do is I open that.

22 And when I open it, this is what I see. So
23 this is -- this is what he -- the only place

1 I've found a point cloud or any work that shows
2 the vehicles put together in the point cloud
3 with this original document, and then I zoomed
4 down on it. And then I look at it from the
5 front. So now I can look at the alignment of
6 the two vehicles. This is his work. And in
7 cloud compare I can -- I can turn the top off.

8 So now I turn the top off, and I can see the
9 Ford logo. And the first thing you notice is
10 the front of this truck is inside the Escape.
11 You don't see any hash on the Escape. He has
12 the vehicle's position forward so that the
13 truck is inside the Escape, which of course
14 isn't a good match when that happens, but he
15 does have the logo. And then here we kind of
16 hold in the front of the Ford so we can see
17 where the Escape logo is inside of the Ford.
18 And then we just measure the distance between
19 the two, and it's 16 inches. So his -- this is
20 his original work that was provided with his
21 deposition. This is his file.

22 Q. Can you leave that up, please.

23 A. Sure. I'm -- yeah, there we go.

1 That was -- my computer is glitchy today too.

2 So that's --

3 Q. Go ahead. Sorry.

4 A. Let me just finish. That --

5 the -- the left is the center of the Ford logo.

6 In his cloud compare, the right is the center

7 of the Ford logo of the truck in his cloud

8 compare and the measurements at the top are

9 what's important. The key to the measurements,

10 is in the lower right, it gives you the X, Y

11 and Z orientations. So the delta-Y is the

12 number to look at. It's 16 inches logo to logo

13 in the work that he did.

14 Q. Okay. And now you just explained

15 that this cloud point is not representing the

16 vehicles at the point of impact. Correct?

17 A. Right. This is his -- this is a

18 representation of where they -- where they are.

19 And because he said it was a twelve o'clock

20 impact, those are 16 inches apart.

21 Q. Right. That's not my question.

22 Is -- you said like the front of the F-250 in

23 this comparison that you're using is already

1 well past impact. It's not -- this is not
2 representative of the point of impact?

3 A. Oh, it is very representative.
4 But this is his maximum -- this is worse than
5 maximum engagement. He's actually pushed the
6 Ford too far into the Escape. But his
7 alignment -- this is the only place in the file
8 that the impact alignment is documented where
9 it can directly be measured without the effort
10 that we had to put into it. This file is the
11 only one we can measure, it's the only one of
12 proof of where the center of the vehicles are,
13 and he -- he has it at 16 inches, which is the
14 impact orientation.

15 Q. Well, let's -- let's back up now.
16 You said this represents the point of maximum
17 impact from -- from Grimes perspective.
18 Correct?

19 A. Yes. This seems -- this is what
20 he's been using to give his opinions off of,
21 but not -- I don't know why he didn't show it,
22 but it's buried in his file. Yeah. It's -- he
23 still met the length of the vehicles and

1 everything, and this is why the length has an
2 issue, but yeah this is much closer to maximum
3 engagement than it is first contact.

4 Q. All right. So this is
5 representing the -- the location of the logos
6 at maximum impact, maximum crush, not at the
7 point of impact between the two vehicles?

8 A. Right. The drawing is near
9 maximum. But because it's a collinear impact
10 it does -- it is -- it is the most represented
11 of the first point of contact that exists
12 that -- that we can do. In other words,
13 he's -- he cannot get a five -- a 10.9 inch
14 offset from this rest or this maximum contact
15 point. These points should still be 11 inches
16 apart because it's a collinear -- excuse me,
17 it's a -- it's a six o'clock PDOF. The truck
18 should push in with five inches -- eleven
19 inches of offset, not 16 inches of offset
20 that's shown here.

21 Q. So your opinion depends upon the
22 crush being perfectly linear with the center
23 line of both vehicles at maximum crush?

1 A. No. Because we have the stamp at
2 near first contact that matches this
3 measurement. So we get the Ford emblem stamp
4 at first contact about 16 inches over that
5 matches this. And then we have his work that
6 shows they're still 16 inches apart, what he's
7 calling maximum engagement. And that's
8 consistent with a straight rear end impact of
9 zero degrees by the -- as -- as the Crosby
10 report says Grimes had him lined up. So we
11 have a record very near first contact. We have
12 a record at maximum contact. And Grimes never
13 showed any of this and -- and -- or revealed
14 this in his deposition, but his file does
15 reveal it.

16 Q. Well, he wasn't asked in his
17 deposition about comparing the Ford logos at
18 maximum crush depth, which is the only thing
19 this shows. And this was produced in his
20 deposition and was part of the basis of his
21 opinion with regard to the maximum depth. So
22 if he didn't feel like the maximum crush depth,
23 which is several feet into the vehicles, was

1 representative of impact point, then it's not
2 like he's hiding anything; he just didn't think
3 they had anything to do with each other.

4 MS. CANNELLA: Object to whatever
5 that was. Not a question.

6 Q. Do you agree with that?

7 A. As long as we don't have physics
8 and Newton's laws and the other evidence, I
9 could agree with you. But we -- we actually
10 have the problem of science and engineering and
11 the ability to calculate, and even know that
12 this truck didn't move sideways. We have a
13 record of this truck on the video where it's
14 not moving sideways during this. For your
15 statement to be true, we would have to throw
16 out everything else we know about this and we
17 would have to have a video of the truck coming
18 in and dancing, you know, as it comes in.
19 And -- and that didn't happen. And so in a
20 vacuum of uneducated persons, yes. But if
21 we're going to do engineering and science and
22 physics, we -- we know that this is
23 representative of first contact. And so I

1 disagree with the statement you make
2 wholeheartedly.

3 Q. Well, even in this -- this scan
4 that you have up here, the Ford logo of the
5 Escape is not lined up with the center line of
6 the Escape. Correct?

7 A. Oh, it is. It is.

8 Q. Well, if you look at the bottom of
9 this image, if you would leave it up there,
10 please.

11 A. I'm doing everything I can. The
12 computer doesn't want to cooperate. I
13 apologize. It has -- it has went black and
14 it's freezing. It's why I can't open the
15 original files. Just give it a second and see
16 if it -- let me see if I can stop sharing and
17 if it will come back. With the video image and
18 all this, it's -- I don't know if you can see
19 me. I can't even see you.

20 Q. I can see you. I can't see
21 anything being shared.

22 A. Yeah, I've got a -- I've got a
23 black screen. There we go. Okay. It says the

1 picture can't be displayed, so something has
2 happened to the PowerPoint. It's one of those
3 things that happens with computers. Let me try
4 to close it and reopen it. Yeah. We're
5 catching some grief here. Okay. Yeah.
6 This -- okay. That's -- that's where we are.
7 Thank you.

8 Q. Do we need a break for you to try
9 to get it up there?

10 A. Well, I -- I thought it was up
11 there.

12 Q. I can't see it.

13 A. Here, try that. How about that?
14 How about that?

15 Q. Right. Okay. If you'd look at
16 the bottom of the screen, you have a yellow
17 tape there in the scan that indicates the
18 center line on the hood of the Escape.
19 Correct?

20 A. Yes.

21 Q. All right. And you're saying that
22 that is aligned with the Ford logo on the back
23 of the Escape in this scan?

1 A. I'm -- I'm not --

2 MS. CANNELLA: Object to the form
3 of the question. Mischaracterizes his
4 testimony.

5 A. I'm saying his logos -- his logos
6 are 16 inches apart, which is the same distance
7 they were apart at impact.

8 Q. Right.

9 A. And we can make measurement of
10 that. We don't have to -- we -- we don't have
11 to try to visualize it. We have an exact
12 measurement of it two different ways. That's
13 what I'm saying.

14 Q. Well, my question is at this point
15 in the crash sequence, what evidence do you
16 have that the Ford Escape logo is still aligned
17 with the center of the Ford Escape?

18 A. Well, it -- well, this is -- it's
19 been pinned and caught by the front of the
20 vehicle. It may not be aligned with the
21 center, but it is definitely -- the
22 relationship between these two is -- is -- has
23 been anchored in the impact. And that's why we

1 have this imprint and we have this -- and them
2 coming in and that's why they're here with the
3 crushed vehicles. That's the reason everything
4 lined up, that's the way Grimes lined it up.
5 It doesn't mean you didn't -- the car was bent.
6 But it's aligned with essentially where it was
7 at the beginning of the impact. But where the
8 front is now, we would have to go look at the
9 video and see what shifting it did. But we
10 don't see the F-250 coming in and going
11 sideways. We don't see the back of the car
12 going sideways to this level. This is --
13 Grimes said to 10.9 inches, and he got it from
14 this, by the way. This is how he got 10.9. He
15 didn't see the crash happen. He used this type
16 of analysis to get 10.9. And he measured
17 between where they were now and projected back
18 to where they were at the time. And he was
19 able to say 10.9. I'm doing in reverse exactly
20 what he did with this crash test, and this is
21 16.

22 Q. So your opinion depends upon the
23 position of the logo as being anchored

1 permanently throughout the crash scene?

2 MS. CANNELLA: Object to the form
3 of the question. Misstates his testimony.

4 A. Look, I change height throughout
5 the day. The more I stand up, the shorter I
6 get. When I lay down at night, I get a little
7 bit longer. But I'm always 6' 2, you know,
8 within reason. Yeah. There -- this is -- this
9 is a really good -- this is the best
10 representation that whatever exists for how the
11 vehicles were at maximum engagement and also at
12 initial contact, and it's the same method
13 Grimes used to get 10.9 inches of offset and I
14 used to get 11 inches of offset, and yes. But
15 perfect within a millionth of an inch, no. But
16 certainly within an inch.

17 Q. All right. And how did you
18 measure the points here between these two
19 edges?

20 A. I just opened up his file and
21 clicked measure between here and here. And it
22 gives me the lateral measurement of 16 inches.
23 It's -- it's -- it is literally the

1 measurements of all of these points that are
2 embedded in his file. I just have to ask the
3 computer to display it.

4 Q. All right. And this measurement
5 scan here was not produced to us prior to the
6 deposition. Correct?

7 A. It was in Grimes's file.

8 Q. Well, not your input of the points
9 and the measurement between the two points.
10 That's not in Grimes's file.

11 A. Yes, it is. All of these
12 measurements are embedded. That's how it
13 generates the images, it knows the measurement
14 between each point. I'm just showing -- I'm
15 just exposing it. That's all I did.

16 Q. Right. But Grimes's scan doesn't
17 contain this pink line and the distance window
18 up there that you've inputted into this, does
19 it?

20 MS. CANNELLA: I'm just going to
21 object to the suggestion that something --
22 something was not produced. That's ridiculous.
23 This is Grimes's data we're looking at right

1 now.

2 Q. That -- you have on the screen
3 right now -- if you back up -- that is
4 contained within Grimes's file, that image
5 right there (indicating). Is that correct?

6 MS. CANNELLA: All of this data is
7 from -- from Grimes's file, Rick. This is --
8 he's just -- he's showing us the file that
9 Grimes produced. That's what we're looking at.

10 MR. HILL: Right.

11 Q. But the image that you just had on
12 the screen with the pink lines and the
13 measurement box, that's not in Grimes's file?

14 MS. CANNELLA: You asked him to
15 create that for you. You asked him to show it
16 to you.

17 MR. HILL: Right. But he created
18 that prior to the deposition. Correct?

19 MS. CANNELLA: No. He did it
20 right in front of us. Sorry. Go ahead,
21 Bryant.

22 A. I -- I did not. I can do it right
23 in front of you if I open cloud compare. These

1 are scaled vehicles all of these measurements
2 are embedded in his file. That's how it knows
3 where all these things are. That's what we do
4 with a scale drawing. When we do a scale
5 drawing, we can take a scale and the scale, it
6 has an infinite number of measurements on it
7 that we just read off. You asked me for the
8 distance between these two points, I put the
9 scale on it. Now, the computers it's AutoCAD
10 so you want the distance between two points, we
11 just put it up and measure them. In this 3D
12 point cloud, all of these measurements are
13 already in there. I'm just going to expose the
14 ones I want to see. So I don't have to make
15 that pink line. I did that to demonstrate how
16 we can use it to show the measurements that are
17 in his file already. I'm just exposing them.
18 It -- because -- because I have to open the
19 cloud compare file, I don't even have the cloud
20 compare file on my laptop that I use for Zoom.
21 It's on a bigger, stronger computer. All we
22 have to do is open his file and say -- and we
23 can get any -- we can get millions of

1 measurements from his file just by telling the
2 computer, show us -- show us these scale
3 measurements it already has in it. We're just
4 exposing it. If it had all the measurements
5 showing, you wouldn't even know what it was
6 because it would just be a cloud of millions of
7 numbers. So this is how builders build houses.
8 This is how re-constructionists draw a scene.
9 This is how re-constructionists look at cars
10 that are stuck together. We use a computer
11 program to open it up. And if I open it up, I
12 can spin it around and look at it and show his
13 work, and I can measure any point that I want
14 to measure and demonstrate it. I'm not really
15 measuring. I'm just exposing the measurement
16 that's in there. So what I did was when I
17 opened the -- the cloud compare, I was going to
18 open it and just show it to you in the depo and
19 then I realized I'm using a non-cloud compare
20 computer and it will also probably kill my
21 video link. I said, okay, let me show them how
22 I would do it if I had the opportunity to show
23 them. It's just -- I'm -- I'm just showing

1 you -- I'm just zooming up a photo is all I'm
2 doing.

3 Q. Right. Well, let me ask this way.
4 Is there any mention in your rebuttal report of
5 your reliance upon Mr. Grimes's point cloud
6 images that you've just shown me as a basis for
7 your opinion regarding the offset in the crash
8 test?

9 A. No. That was his work. He
10 already provided the measurements. I'm just
11 showing you his measurements to support that my
12 work, you know, is accurate. We didn't -- we
13 knew that the videos and whatnot showed it
14 being off. So we went through the upwards.
15 And Mr. Grimes didn't even understand there was
16 a stamp there. So I thought that would be the
17 easiest way for someone to understand it.
18 You're obviously having trouble understanding
19 this cloud compare file and how it functions.
20 But if I just open up his own file and show you
21 this drawing, I mean, that's all I'm doing
22 here.

23 Q. I -- I totally understand the

1 cloud drawings. I'm saying there's no mention
2 in your report that you will be relying upon
3 Grimes's cloud drawings in -- regarding the
4 offset.

5 A. Yeah. I -- I said I used his
6 file. I mean, that's what we used. That's
7 what we used was Crosby's file and Grimes's
8 file and Crosby's depo and Grimes's depo.

9 Q. All right. Well, I think it's
10 pretty clear you said there's three methods
11 that you used to determine the offset --

12 A. My work. This is his work.

13 Q. If you'll let me finish. But if
14 you're going to rely upon his work --

15 A. Sir -- sir, I can't see you the
16 way we're doing this. Can I go back to where I
17 can use the camera to see you?

18 Q. Sure.

19 A. That's why I'm interrupting you.
20 Thanks.

21 Q. Can you see me now?

22 A. Nope. Not yet. I'm trying. I
23 can see you now.

1 Q. Okay. All I'm trying to establish
2 is, can you point to where in your rebuttal
3 report you indicate that you intend to rely
4 upon the cloud scans done by Mr. Grimes to give
5 opinions regarding the offset in the crash
6 test?

7 A. I would -- I think it's in the
8 file materials I listed. This is just one of
9 his file materials. He didn't -- remember, the
10 photos we're using, you know, are his photos.
11 I've got hundreds of photos I didn't show you,
12 but I'm using all of those. So this is just
13 part of his file. I think I said file. Let
14 me -- let me -- let me open up -- let me open
15 up my report if I could find it.

16 Q. Sure.

17 A. Man, yeah, it says I have reviewed
18 and analyzed report and deposition of Grimes,
19 report and deposition of Crosby, scan data,
20 which is what we're looking at, and photos and
21 video data from the crash test performed by
22 Grimes and Crosby. And then I -- I go on to
23 say one more time to say Grimes's file

1 materials. And I say based on the above, and
2 then -- then I used it. And then the other is
3 my own work. But if -- if Grimes had a photo,
4 I would expect that I could use it.

5 Q. Well, I'm saying you specifically
6 delineate in your report that you use three
7 methods -- three methods to determine the crash
8 test offset.

9 A. That's my independent --

10 Q. Let me finish my question. Was
11 this method of using Grimes's scan data listed
12 as one of the methods that you used to
13 determine the test offset?

14 A. No. Because my methods were
15 independent of this. This is just his data
16 that's in his file that follows the same
17 methodology that he did to reconstruct the
18 accident and that I used to reconstruct the
19 accident. He's presented it for us just like
20 he did all of his other data, just like he
21 presented scanned images of how the accident
22 vehicles hit. I'm just using his presentation
23 to point out what the measurements actually are

1 in his work because he didn't know. But it is
2 in there just to be -- just to be measured. So
3 no, I'm -- I'm just -- I was just going over my
4 work. This is his work.

5 Q. Are there any other methods,
6 whether it's based upon your work or
7 Mr. Grimes's work or Mr. Crosby's work, that
8 you're going to rely upon to give testimony
9 regarding the offset in the crash test?

10 A. In the -- in the PowerPoint we
11 show where his tow hook hit the crash test
12 versus where it hit in the accident. That's
13 just using the photos. I put them in here. I
14 don't need the PowerPoint. I can show you the
15 photos. But I did put you some photos in what
16 we did yesterday to show the tow hook. If you
17 want me to use the original photos, I'll use
18 the original photos. And we don't get a
19 measurement out of it, per se, unless we use
20 Grimes's work. Then -- then you can measure
21 it. But you can see the tow hook really well
22 in some of the photos.

23 Q. I just want to make sure I've

1 covered every basis for your -- or all of the
2 information you're relying upon to give
3 opinions regarding the offset in the crash
4 test. We've --

5 A. I'd like to show a photo then.

6 Q. Sure.

7 A. Share screen. Let me find which
8 photo it is. Come on, computer. It's -- it's
9 refusing to open.

10 MS. CANNELLA: We can see the
11 PowerPoint, Bryant. We just -- probably like
12 you, it's just blank.

13 THE WITNESS: Yes.

14 A. The image on the left, slide 16 in
15 what I've given -- maybe the attorney can open
16 up slide 16 in -- in what we gave you.

17 Q. All right. Let me look.

18 A. I've got to stop sharing and try
19 to get this off my screen. Apparently, when I
20 share it, it locks me up.

21 Q. Yeah. I've been having the same
22 issue.

23 A. You know, the bigger the computer

1 gets, the -- the files seem to always stay in
2 front of them.

3 Q. So you need slide 16 from -- from
4 which document?

5 A. Intended impact versus actual
6 impact.

7 Q. And this is from your file that
8 you produced in association with this report?

9 A. Yes.

10 Q. The rebuttal report?

11 A. It's in the GBB Post Depo Plus.

12 Q. What did you call that again?

13 A. I have a folder called GBB Post
14 Depo Plus. I assume it's -- yeah. It's --

15 Q. I don't have such a folder.

16 A. The -- the PowerPoints I've been
17 showing you and my amended report were in that
18 folder.

19 Q. And the title again is what? I'm
20 sorry.

21 A. 10519 -- this says it's Quest Post
22 Depo.

23 MS. CANNELLA: Yeah, that's what

1 we sent -- that's the -- that's what we sent
2 you. That was their name of the file.

3 THE WITNESS: Yep. If I said GBB,
4 I meant Quest. 10519 Quest Post Depo.

5 MS. CANNELLA: And then aside of
6 that is, approach angle plus, photomodels plus,
7 and then a whole bunch -- not a whole bunch,
8 but a number -- a dozen or so or less PDFs.

9 Q. I don't see that file. Sorry.

10 MS. CANNELLA: What's the name of
11 it, Bryant, did you say?

12 THE WITNESS: It is 10519 Quest
13 Post Depo Plus.

14 MS. CANNELLA: Yeah. But what
15 inside of that file did you want?

16 THE WITNESS: Let me verify.
17 Intended versus actual impact.

18 MS. CANNELLA: Intended impact
19 versus actual impact?

20 THE WITNESS: Yes.

21 MS. CANNELLA: If you need me to
22 get that --

23 MR. HILL: No, I have that once

1 you explained it that way.

2 THE WITNESS: Yeah.

3 MS. CANNELLA: All right.

4 Q. Is that it (indicating)?

5 A. Yes, sir. Slide 16.

6 Q. Let's go ahead and mark this
7 document, intended impact versus actual impact.
8 It's Bryson 09487 through 9508 as whatever the
9 next exhibit is.

10 (Defendant's Exhibit Number 4
11 is marked for identification.)

12 Q. Okay. That slide appears to be
13 elite page 16, although you call it slide 16.

14 A. That's it.

15 Q. All right.

16 A. Okay.

17 Q. And what did you want to -- you
18 said you wanted to refer to this photo as
19 additional support for your offset opinions?

20 A. Yes. If you go down one slide --

21 Q. Slide 17?

22 A. Yeah. 17, the red arrow shows
23 where the tow hook hit in the accident. And

1 slide 17 shows where the tow hook hit in the
2 crash test. And there's an orange line dropped
3 down from the bolt poles on the tailgate of
4 where the license plate is. It's one foot
5 across. And we can clearly see that the tow
6 hook imprint in the accident is to the right of
7 those bolt holes. And in the crash test the
8 tow hook imprint is to the left of those bolt
9 holes.

10 Q. Right. And this is the position
11 after both crashes, not at the point of initial
12 impact?

13 A. Well, no. The one on the right is
14 initial impact because that tow hook is -- left
15 a dent in the tailgate right there. I mean,
16 that's -- the tow hook sticks out the furthest
17 in the front of the truck. And on the left,
18 that dent in the bumper is from the tow hook.
19 And if we go on to zoom up on it, it's got a
20 little bit of white paint on it from the tape
21 on the front of the tow hook. And that's what
22 bent the bumper the way it is. So that's where
23 the tow hook hit there as well. So that's --

1 those represent as good as accident
2 re-constructionists can do in an initial impact
3 because of the -- the orientation of the impact
4 and everything. So yeah, that's -- that's --
5 that's where it was pushed to. But it's also
6 the piece of metal where it started. And it
7 also proves it's not an override because that
8 tow hook is stuck on that bumper all the way to
9 maximum engagement. If it was an override,
10 then that tow hook which is located on the
11 bumper of the truck wouldn't still be pushing
12 on the bumper of the car.

13 Q. And do you have a photograph that
14 shows the white tape that you mentioned?

15 A. Go to the next slide.

16 Q. Yeah. And that's --

17 A. And -- sorry.

18 Q. Is that correct?

19 A. Go down a slide or two in this
20 presentation and we'll get up close on it.

21 Q. All right.

22 A. Keep going. There we go. Okay.
23 That slide right there (indicating), we can see

Bryson, Santana and Joshua v. Rough Country, LLC

Page 254

1 the white on the bumper in the top image. And
2 we see the bumper is caved in because the tow
3 hook hit it in the crash test. But in the
4 bottom half of this slide, that's the bumper
5 from the accident vehicle. And it -- you know,
6 it's still got its original shape for the most
7 part. But you can see the tape marks up in
8 that hole a lot better in that photo.

9 Q. All right. Where exactly are the
10 tape marks on the photo on the top?

11 A. If you follow the bumper in, at
12 the maximum point of the bumper. So right
13 there (indicating). Yep. Right there. Those
14 white marks are from the tape. I need to --
15 let me see if I can find the image. This is --
16 give me just a second. Oh, okay. Go to slide
17 13. There we go. There's a close-up of the
18 tow hook, a little bit of black on the end on
19 top of the white tape. And there's the white
20 tape mark up on the bumper of the Escape.

21 Q. Gotcha. And that's Bryson 9499.

22 A. Oh good.

23 Q. All right. Anything else about

1 this photograph that you're relying upon or
2 these photographs or this presentation with
3 regard to the offset?

4 A. Yes. Go to slide 20. Slide 20 is
5 not the -- not the same one I was looking at.
6 15 would be it. I'm sorry. 15 is kind of a
7 comparison of the one we just looked at to show
8 where the frame horn hit in the accident
9 compared to where the frame horn hit on slide
10 13 that we were just talking about. And I say
11 the frame horn. I actually mean the tow hook.
12 I apologize.

13 Q. So slide 15, which is Bryson 9501,
14 you're matching up the tow hook in the accident
15 F-250 on where you think the tow hook impacted
16 the accident Escape? That's the premise of the
17 red area?

18 A. Yes, and that gives eleven inches
19 of offset.

20 Q. And what basis do you have to
21 conclude that the point of the red arrow is
22 indicative of the point where the tow hook
23 impacted the accident Escape? Like what's --

1 what all supports that opinion?

2 A. Well, physics, accident
3 reconstruction experience, and both Grimes and
4 Buchner did it exactly the same way. We used
5 the tow hooks. He says, he used the tow hooks
6 to match them together. That's how he got his
7 10.9 and, you know, we got our approximately a
8 foot, which is, you know, 11. We're -- we're
9 both using the same methodology to match the
10 damage profile. That's how it's taught in the
11 accident reconstruction books. You -- you
12 match up the damage profiles on to the known
13 areas. And then you know where those known
14 areas were, you know, before they were
15 undamaged, and that gives you your
16 measurements. It's -- it's -- that's accident
17 reconstruction 101. How else could you do it?

18 Q. And you used a similar indication
19 of the tow hook impact location on the bumper
20 cover of the crash test Escape to analyze the
21 offset?

22 A. We did. In my photos of the seize
23 bracket, we located the seize bracket on the

1 bumper. If you go down to -- what was it?
2 Slide 21. In my report, in my work, in my
3 depo, there's a dent on the -- on the bumper
4 there at the bottom that corresponds to the
5 four and a half inches wide seize bracket.
6 That's working out of memory, four and a half
7 inches. But there is a dent on the right
8 center of that, that corresponds to that seize
9 bracket as well.

10 Q. Right. So that shows you that the
11 C's bracket impacted the bumper in the actual
12 subject accident?

13 A. Yep. As an override. So it went
14 up and over it and kept going. And the bumper
15 went out of the way and that's why it was --
16 you know, it was already compromised by that
17 point in time.

18 Q. Right. But the seize bracket did
19 at least impact the bumper in the actual
20 accident?

21 MS. CANNELLA: Asked and answered.

22 A. Yeah. But in the crash test the
23 seize bracket did not hit the bumper. Only the

1 tow hook hit it, and that's why it's not an
2 override.

3 Q. And so my question was did you --
4 you see here -- and this is slide 20, Bryson
5 9506. And you see here there is the bumper
6 cover hanging down on the bottom right of the
7 crash Escape. Did you reference any tow hook
8 marks on the bumper cover to determine the
9 offset in the crash deck?

10 A. I don't -- I don't have enough to
11 do that with. No, sir. I just have the photos
12 that were provided. I have a better record of
13 it. I have a permanent record in the bumper
14 that I can see, so I'm happy with that. No, I
15 haven't used the bumper cover of the crash
16 test.

17 Q. That was my only question. Okay.

18 A. Sorry.

19 Q. All right. Looking here at the
20 slide we have up, slide 20, it's a rear view of
21 the accident -- I'm sorry, the crash test
22 Escape on the left. And looking at that
23 photograph, can you tell whether the rear seat

1 was deflected by the hatch on the Escape?

2 A. No.

3 Q. Okay. What would you need to look
4 at in order to determine that?

5 A. We've talked about that already.
6 I thought there was some motion of it. But I
7 wasn't sure if it was the floor pan or the
8 hatch or what. I didn't have -- you know,
9 Grimes didn't measure or scan it.

10 Q. Yeah.

11 A. I don't know. It's irrelevant to
12 me because this crash test is not relevant --
13 not representative of the accident. But I
14 think -- I said I think it was displaced some,
15 but I don't know why.

16 Q. Yeah. I was just asking what
17 would you need to look at to -- to confirm the
18 source of the displacement in the crash test.
19 Whether you think it's relevant or not, what
20 would you need to do to do that?

21 A. I'd have to start working to see
22 if I could figure it out. But of course I'd
23 need to see the inside of the vehicle, which

Bryson, Santana and Joshua v. Rough Country, LLC

Page 260

1 I -- I haven't seen.

2 Q. Right. All right.

3 MR. HILL: Let's take about
4 another four-minute break.

5 MS. CANNELLA: Before we go off
6 the record -- just before we go off the record,
7 Rick, can you send me that -- that image that
8 you put on the screen with the HVE of the wreck
9 Escape?

10 MR. HILL: Sure. I'm going to
11 have to find it. I'll do it when we go off the
12 record at the end.

13 MS. CANNELLA: Thank you.

14 MR. HILL: All right.

15 THE VIDEOGRAPHER: The time is
16 4:11 p.m. We're now off the record.

17 (A break was taken.)

18 THE VIDEOGRAPHER: The time is
19 4:39 p.m. We're back on the record.

20 MR. HILL: Thanks.

21 Q. (Mr. Hill) Mr. Buchner, what
22 evidence do you have or that you intend to cite
23 to that Mr. Grimes used the distance between

1 the logos in his point -- in his cloud scans of
2 the subject accident to determine the offset in
3 the subject accident?

4 A. I'm not saying he did because he
5 didn't even notice the logos according to his
6 depo. I'm just using his work. That was the
7 easiest way I thought I could demonstrate it
8 because it's the easiest way to find the center
9 of the vehicle in his -- in his -- the scan he
10 gave us. But we could probably, you know, use
11 the center line markings or some other things.
12 But the logos are -- just were the simplest to
13 me because I knew where the logos were at first
14 contact -- or represented at first contact.
15 And I also knew that we had used -- he had used
16 things like a tow hook to back it up at the
17 crash. So this is just the same methodology.
18 So no, he's -- he's free to use whatever he
19 wants. He -- he basically -- I don't think
20 he -- he even opined to what the offset was
21 unless he said 10.9 inches in the crash test.

22 Q. Okay. I think -- I think we
23 misfired there. I was asking about the subject

1 crash.

2 A. Oh.

3 Q. Not -- not the crash test. So it
4 was the subject crash. What evidence do you
5 have that Mr. Grimes used the distance between
6 the logos at maximum crush to determine the
7 offset in the actual crash?

8 A. Well, that's -- it was 10.9 inches
9 according to him because that is -- would be
10 the offset. I don't know if he used that or
11 whether he used other things. I don't think he
12 had ever seen the logo imprints if he was -- in
13 his depo. He was probably using the tow hooks
14 or something similar. But you know, they're
15 all geometrically tied together. So whether he
16 is using it or not, that's the answer. I'm not
17 saying he did use it. I'm saying that's --
18 that's something I can use to easily show some
19 additional work within the accident. I
20 don't -- I think he was probably using the tow
21 hooks.

22 Q. Okay. So if we read your
23 deposition transcript from earlier today and it

1 says that you opined that Mr. Grimes used the
2 distance between the logos and his scans of the
3 actual subject vehicles to determine the offset
4 in the actual crash, that would be a misreading
5 or a misinterpretation of your testimony?

6 You -- you don't know whether he used that or
7 not to come up with the 10.9 number that he
8 decided was the offset in the subject crash?

9 A. I can look at it both ways. Yes,
10 that is a good accurate statement I made. And
11 we can also look at it where it is inaccurate.
12 The bottom line is the only point cloud match
13 that he provided that could be opened and used
14 shows 16 inches between the logos. There isn't
15 one that shows 10.9 and there's nothing in his
16 file that's a point cloud where they match that
17 he provided that can show 10.9. Every -- every
18 reference that we use would give 16. I just
19 use those. And they are his measurements
20 because they're part of the point cloud. But
21 he didn't reference them. So I agree he didn't
22 reference them, and I'm not saying he said he
23 referenced them. I'm saying, in what he

1 provided, he provided that measurement.

2 Q. Right. You keep switching back
3 between the crash test and the subject
4 accident. I'm not talking about the crash
5 test. I'm talking about the subject accident.
6 In Mr. Grimes's analysis of the subject
7 accident. You testified earlier today that you
8 believed his methodology for coming up with
9 10.9 in the subject crash was based upon his
10 point cloud scans of the subject vehicles and
11 the measurement of the distance between the
12 logos in those scans. And I'm saying, do you
13 have any basis to believe that he used the
14 distance between the logos and the point scans
15 of the actual vehicles to come up with the
16 offset in the actual crash?

17 A. In the actual crash, whether he
18 clicked on the logos or not, they're in his
19 point cloud. Similarly, you can measure
20 between them. I'm not saying he used those.
21 I'm not even saying he looked at those. He
22 might have just been using the -- the tow hooks
23 and things that he testified to. But as I sit

1 here, I haven't -- to my knowledge, I haven't
2 seen his point cloud match for the accident.

3 Q. Okay.

4 A. If I can find it though, I could
5 do a better job of answering the question.

6 Q. Sure. Did you use your scans --
7 your point cloud data from the actual crash to
8 measure the distance between the logos at
9 maximum crush to calculate your offset in the
10 subject crash?

11 A. No. We -- we didn't calculate the
12 offset. We matched the vehicles together to
13 demonstrate the offset.

14 Q. Right.

15 A. And then -- then of course we can
16 measure between any references on the vehicle
17 we want to get it. When we actually went back
18 and did the eleven inches, I don't -- I don't
19 remember if we were -- I'm pretty sure we were
20 using the logos before that. But we could have
21 done it two or three other ways. But -- but
22 because you want to check it a few times, a few
23 different ways. I don't remember exactly what

1 the process was. But we got, you know, eleven.
2 I think there's something -- I think there's
3 even something -- I think we are measuring the
4 logos for the eleven.

5 Q. Can you say for certain how you --
6 first of all, it's my understanding in your
7 original report and your original deposition
8 and in your original simulation you determined
9 the offset was twelve inches. And you indicate
10 that you actually determined the offset in the
11 subject crash to be eleven.

12 A. Okay. It's almost an
13 understanding or a semantics issue. In my
14 deposition I didn't have the offset recorded or
15 written down. I was asked so I took a ruler to
16 our scale drawings and -- and said, hey, it's
17 approximately a foot. You know, it's very hard
18 on those drawings to see an inch at the size
19 they were printed out for. So once I said a
20 foot, I've been true to a foot. But I know
21 that Grimes said 10.9. And I've checked our
22 work since then, and I'm like, okay, if we
23 really push our work and our clouds and

1 everything, 11 inches is the right number.

2 So -- so I'm not changing, I'm just able to be
3 more accurate because I went back and did it
4 more precisely with a better tool.

5 To be clear, the offset is determined by the
6 damage match on the vehicles. I don't measure
7 it and then decide how to put the vehicles
8 together. I put the vehicles together. And
9 then if I want it, I open up the file and I
10 measure it. In other words, the -- the
11 physics, the geometry of the vehicles
12 determines it. So it's -- it's an oversight on
13 my part not to have recorded it, written it
14 down or saved that measurement, but it's a
15 product of the -- of the work we do. It's --
16 and it's contained in the work with all the
17 millions of other measurements that are in
18 there. I just had not formally presented it.
19 And I did the best I could in the depo to give
20 a good answer, which was twelve.

21 Q. Okay. You had to have done that
22 work you just described in order to decide what
23 offset to use in your original simulation.

1 A. Right. At -- at the time the
2 simulation was set up, I could have opened it,
3 measured it or Ms. Porter could have done that
4 and then put it in the simulation. In other
5 words, that's the way it would have worked
6 because we have the measurement contained --
7 not in a contained simulation, but contained in
8 the point clouds.

9 Q. Right. So you -- at the time you
10 ran the original simulation, you went through
11 that process and you decided to input twelve
12 inches as the offset in the original
13 simulation?

14 A. I think we probably put in eleven.
15 But like I said, I don't have that file
16 anymore. Now, since -- since we redid it, I
17 said I want to be true to what I said in the
18 depo. And that errs in the favor of -- of
19 producing more crush.

20 Q. Yep.

21 A. So I gone with the twelve because
22 that's what I said in my depo, but if you --
23 you want to know what I believe it is in my

1 heart, I believe it's 11. But both of them are
2 approximately 11, approximately 12. Either one
3 is fine.

4 Q. Right. But you don't know as we
5 sit here today what offset you used in your
6 original simulation that formed the basis of
7 your -- your -- your report in this case?

8 A. That's right. I would say 0.9
9 plus or minus 0.1 along in there depending on
10 what we measured that day.

11 Q. Okay. Right. And now that you
12 say that you've looked at it closer after your
13 deposition and you think it's closer to eleven,
14 what -- how did you come to that conclusion?
15 What -- what was the methodology you used to
16 come to that conclusion?

17 A. Well, I'll give you -- I've
18 provided you an image of it, of one of them and
19 one that's easy for the jury and everybody to
20 understand. It's in the crash test offset
21 PowerPoint, if you'd like to open it or I'll
22 try to open it.

23 Q. I can do it. Hold on.

1 A. I -- I produced something that was
2 simple.

3 Q. Yeah. All right. Can you see
4 the -- this is the -- we've marked this as an
5 exhibit somewhere along the lines. This is
6 crash test offset, that's what you're referring
7 to?

8 A. Yeah. Slide two.

9 Q. All right. Slide two. This slide
10 here?

11 A. Yes.

12 Q. All right. And so this appears to
13 be a measurement of a photograph -- or is this
14 a scan of the subject, Escape?

15 A. This is a -- this is a photomodel
16 of the Escape, the accident Escape where we can
17 see the logo imprint of the Ford on it, of the
18 Ford F-250 on it. So in the -- in the process
19 of doing our work for the rebuttal, we had to
20 make a photomodel of the Ford with a logo on
21 it. We've already talked about that.

22 Q. Right.

23 A. And so then we made a measurement

1 on here, and we got a little less than eleven
2 inches.

3 Q. All right. And is this the --
4 it's not a photograph that you put in the
5 photomodel. It's a -- it's a point cloud,
6 correct, scan?

7 A. You use the scan. But you also
8 put in hundreds of photos. And the --

9 Q. Okay.

10 A. If your scan is accurate and your
11 photos are decent, it can -- it can create a
12 photomodel, which is more than just a point
13 cloud.

14 Q. I got you. So it uses both the
15 point cloud and the photographs and all of that
16 combined?

17 A. Yes.

18 Q. Okay. And then the software then
19 based upon you indicating the points will tell
20 you the 3D distance between the two points?

21 A. Right.

22 Q. And that's what the pink line
23 is -- is represents?

1 A. Yes.

2 Q. On page two of the crash test
3 offset.

4 A. Yes.

5 Q. How did you determine the midpoint
6 of the Ford logo you can see in this
7 photograph?

8 A. It's visually. It could be a
9 little bit to the left of where it is. But if
10 I missed it, I wanted to miss it a little bit,
11 you know, to the right. So it's -- it's a
12 visual determination. Trying to -- the bottom
13 of the arc in the left and the center of the
14 logo in the right because they are about the
15 same level and measure it.

16 Q. Okay. So -- so you didn't measure
17 the width of the Ford logo here and determine
18 the exact midpoint of the logo when you input
19 the points for the photomodel to do the
20 measure. You just eyeballed it?

21 A. Right. I just clicked on the
22 center and then clicked on the bottom of the
23 arc on the left. If somebody wants to do it

1 again and come up with a little bit different
2 number, I'm okay with that.

3 Q. Sure. And then as far as the
4 bottom of the arc, you just eyeballed that.
5 That's in your mind an approximate bottom of
6 the middle of the arc of the F-250?

7 A. Right. If I were going to do it
8 again, I might move them both left about a
9 quarter of an inch, but it's still going to be
10 eleven inches. Well, this is actually a little
11 less than eleven inches. So it's going to be
12 right at eleven.

13 Q. All right. Did you undertake any
14 other methodology to determine the offset in
15 the subject crash?

16 A. Other than using our scan, no.
17 But it's not written down or recorded. It's
18 just clicking on a scan. I used the scan of a
19 depo, say a twelve, and then I'm using this to
20 get a little less than eleven. I'm -- I'm
21 convinced eleven is the right number.

22 Q. All right. What is the relevance
23 of the crash test offset not matching the

1 subject crash offset? Why is that relevant to
2 you?

3 A. You're engaging less of the back
4 of the Escape, so you're still -- you're still
5 hitting, you know, at the frame level. But
6 you're engaging less of the back of the Escape.
7 So you know, it's -- it -- it probably
8 overstates the crush from that, just one
9 observation. And what we'd like to see is a --
10 is something that doesn't have unnecessary
11 variables. We have a lot of variables in the
12 crash test, too many to actually get a final
13 opinion out of anything other than that, hey,
14 it didn't override, which we already knew it
15 wasn't going to override, you know, just based
16 on the structure of the vehicles and their
17 original design. We didn't need a crash test
18 for that, but other -- that's -- that's what it
19 provides. Beyond that, I don't know that it
20 provides information.

21 Q. Okay. And when you say it
22 probably overstates the crush, have you
23 undertaken any work to determine whether it

1 does overstate the crush?

2 A. Well, logic would say that it
3 would. But since we don't have a crash that
4 represents, you know, the proper elevation, the
5 proper over -- over -- overlap, all we can say
6 is that it probably does because as Mr. Grimes,
7 he confirmed that in his deposition. We know
8 that -- we know historically that the less
9 overlap we have, the more crush we have because
10 the width and the depth are the two things that
11 develop crush -- that determine crush. If we
12 have less width, we have more crush, because
13 they're mathematically related in the physics,
14 in the calculations that we -- we use in
15 accident reconstruction. So the formulas we
16 have state that there will be less -- will be
17 more crush in the test because it has less
18 offset or more offset.

19 Q. And did you make any effort to
20 calculate the -- the increase in crush that you
21 say would be attributed to an increase in
22 offset?

23 A. No, I have not.

1 Q. Okay. And so you're not able to
2 quantify the difference in crush that would be
3 caused by the alleged five plus or minus one
4 inch additional offset that occurred in the
5 crash test?

6 A. No.

7 Q. Okay. Hold on one second. I
8 thought somebody on here was sending me a chat.
9 So -- apparently not. So I'm sorry.

10 Is one way that you could make an effort to
11 quantify the difference in crush that would be
12 attributed to an increase in offset would be to
13 run an HVE simulation, use your exact
14 parameters that you used in your simulation,
15 and increase the offset and then see what the
16 program spit out as far as an increase in
17 crush?

18 A. I don't know.

19 Q. So you dont know if the software
20 would be able to tell you the difference in
21 crush based upon a difference in offset?

22 A. Not to the level the crash test
23 would have done with accuracy. I think

1 intuitively we all know there would be more
2 crush. But we don't know if it would be
3 representative. And we don't know if it would
4 be a reliable methodology because we've been
5 through that already. That's -- that's a -- a
6 simulation compared to a crash test. Grimes
7 used a crash test to try to compare the
8 accident. And now you're going to do a
9 complete new analysis to compare a simulation
10 to a crash test. That's -- that's not possible
11 to do sitting here. We've been through this.

12 Q. Well, I'm not asking you about
13 that. I'm asking you, you could run an HVE
14 simulation with increased offset and compare
15 that to your other simulation, and so you'd be
16 comparing the exact identical simulations with
17 the only change being the offset. That's
18 possible. Correct?

19 A. Nope. For the reasons we talked
20 about, I cannot agree with you on that.

21 Q. Okay.

22 A. Thank you.

23 Q. Yeah. So it's not possible to run

1 your exact same simulation, but increase the
2 offset to 17 inches. That's not --

3 MS. CANNELLA: Objection. Asked
4 and answered multiple times for hours on end.

5 Q. You can answer.

6 A. I've answered that as good as I
7 can. I don't have any more to say. I mean --
8 I -- I do not -- I cannot say that we can do
9 that, no, for all of the reasons I've been
10 going over.

11 Q. And therefore you cannot say
12 whether that would be an appropriate
13 methodology for verifying whether the HVE
14 software is a scientifically reliable
15 methodology for predicting crush?

16 A. Pardon?

17 Q. Yeah. If you can't say that any
18 variation in offset is necessarily going to be
19 a reliable HVE test, that's what you're saying
20 is that the only reliable HVE test you know of
21 or simulation you know of is the one you ran.
22 And if you change the offset, you can't verify
23 whether that simulation would be a reliable and

1 accurate simulation?

2 MS. CANNELLA: Objection. He did
3 not say that the only reliable HVE he's ever
4 seen is the one that he ran.

5 Q. All right. You can explain it.

6 MS. CANNELLA: What's the
7 question? I mean, object to the form of the
8 question. Misstates his testimony.

9 Q. Go ahead. Answer it if you can.

10 MS. CANNELLA: No. Don't answer
11 it, Bryant. It doesn't -- it's not a
12 question -- it's not a question that makes any
13 sense because he never said that. So how can
14 he answer that if you're saying he said that
15 and he didn't say that.

16 MR. HILL: Are you instructing him
17 not to answer?

18 MS. CANNELLA: Yes, I'm
19 instructing him not to answer because it's
20 getting crazy. You keep telling him your --
21 it's your testimony that X, Y, Z and he doesn't
22 testify to those things. So ask him whatever
23 question you want to ask him without

1 characterizing his testimony -- or
2 mischaracterizing it.

3 MR. HILL: I've asked him that.

4 Q. Would a -- do you have an opinion
5 as to whether an HVE simulation run exactly the
6 way you ran the simulation in this case, your
7 amended simulation, with the only change being
8 to increase the offset to the offset that you
9 said occurred in the crash test, do you have an
10 opinion as to whether that simulation would be
11 a proper scientific methodology to evaluate
12 what the simulation would produce at that
13 different offset?

14 MS. CANNELLA: Object to the form
15 of the question. Asked and answered. Outside
16 the form -- the scope of his supplemental
17 testimony. He did not run an HVE on the
18 Exponent crash test, and he has explained
19 multiple times why he cannot tell you whether
20 it would be an accurate methodology as he sits
21 here today. This is a conversation we already
22 had, and you said you were done with this line.

23 MR. HILL: Yeah, I'm asking in a

1 different way now. I'm -- I'm not talking
2 about comparing it to the crash test. All
3 right? I'm saying -- he says that there is a
4 differentiation in crush that occurs based upon
5 the level of offset. And I'm asking him, is it
6 his opinion that it's impossible to use HVE to
7 determine how much additional crush occurs per
8 a set distance of offset.

9 Q. Is it your opinion that that's
10 impossible to use HVE for that type of
11 determination?

12 MS. CANNELLA: Same objections.

13 Q. Go ahead.

14 A. I answered the question. It's not
15 using HVE. I just used standard accident
16 reconstruction calculation methodologies for
17 crush and width. There is a relationship
18 between the two. And when width is decreased,
19 crush goes up by every formula that I've ever
20 seen written in accident reconstruction.

21 As for as using the simulation, I haven't
22 done that analysis and I'm totally
23 uncomfortable for the reasons we've been over

1 many times already. I cannot tell you that we
2 could use the simulation for that, the way
3 you're asking and I don't -- because that's
4 a -- that's a new analysis, and I'm not willing
5 to -- to state we can. I'm not even willing to
6 start doing the analysis here. But I did try
7 to give you some examples earlier, my concerns.

8 But no, I don't have an opinion about that.
9 And -- but I do have an opinion that decreasing
10 width -- increased width of overlap increases
11 crush. And we know that because every single
12 crush formula that's ever been written that I'm
13 aware of that we use our calculators for,
14 would -- would show that there is a
15 relationship that when the width is -- is
16 decreased, the crush increases.

17 Q. Would you agree that in order for
18 the HVE simulation to be a reliable methodology
19 as you've used in this case, that software
20 would need to follow that same relationship you
21 just mentioned that the calculations show as a
22 part of science, it would need to follow that
23 same methodology in order to mirror the actual

1 science that you know of with regards to the
2 truck?

3 MS. CANNELLA: Object to the form
4 of the question as vague and confusing.

5 Q. Go ahead.

6 A. In general we know that we'll
7 follow that generic methodology, but that's
8 generic. In other words, but to apply it to a
9 particular crash test, which is what you're
10 asking me to do, you would have to go through a
11 whole process to see whether it was applicable
12 and reasonable.

13 Q. I'm not --

14 A. I'm sorry. I haven't done that.
15 And so the answers I've given have been true
16 and accurate today. We're not -- we understand
17 how the simulation works. We understand how
18 the calculations work. That's fine. We just
19 can't make the leap -- and is it a leap you're
20 asking.

21 Q. Well, I'm not asking you to
22 compare it to the crash test. I'm asking a
23 simple -- I won't use the term simple, but

1 could there be a scenario where HVE, as you
2 increase the offset, it doesn't match the
3 mathematics that show how much crush should
4 increase as you increase the offsets?

5 A. You're asking a blind question
6 with information that I don't know what you're
7 asking about. You won't even let me relate it
8 to the crash test. So you know, we've -- we've
9 used it to change one variable, the height, so
10 that we got contact. And I think it's very
11 robust for that near -- with -- with lots of
12 overlap between the vehicles. That's what we
13 use it for. Beyond that, all of these other
14 things, I -- I don't have any opinions about
15 those. I can't help you.

16 Q. Okay.

17 A. But I can tell you that -- that,
18 you know, there is a relationship between crush
19 and width and the program will generally follow
20 that. But there are other concerns that have
21 to be all addressed before we can start
22 agreeing to -- to what you're asking me to
23 agree to. I can't do that.

1 Q. What is your basis for your
2 opinion that changing the height of the vehicle
3 allows HVE to be a robust simulation program
4 and to properly simulate the hypothetical crash
5 with the height being changed? What's your
6 basis for that opinion?

7 MS. CANNELLA: Object to the form
8 of the question as vague, confusing.

9 Q. Go ahead.

10 A. Because we now -- once we remove
11 the lift kit, we've got now a bumper level,
12 frame level to frame level, bumper level
13 impact. The simulation program, I've been
14 using it since 19 -- 1991, so over 30 years for
15 things like this, and it's been acceptable
16 since for that period of time. There's been
17 plenty of papers written to validate its
18 reasonableness. It came with the crush
19 stiffness coefficients that were needed to do
20 it. All I had to do was tell it the speed at
21 impact and I could verify that those speeds we
22 got the delta-V's. So -- so I have -- I'm
23 using it well within its constraints. And I

1 don't have any concerns about how the vehicle
2 was contacted because I'm getting that good --
3 that good match up that I think would have
4 happened in the accident had it not been a --
5 not jacked up, but raised, lifted. So I think
6 I'm using the program exactly as it's supposed
7 to be used for -- for this particular purpose
8 and how I've seen it used before.

9 Q. And if you change the offset, you
10 don't have an opinion as to whether you'd be
11 using the program exactly as it's designed to
12 be used?

13 A. You'd have to go through the
14 analysis before you used it. It wouldn't be
15 right just to say, yeah, let's just go use it
16 for whatever -- you know, someone can ask a
17 question about it. I'd need to take the time
18 to look at it as an engineer. I mean, that's
19 the truth.

20 Q. So if you changed the offset and
21 ran it, what would -- what kind of result would
22 you need to analyze or look at to decide as an
23 engineer whether it was still valid at the

1 different offset level?

2 MS. CANNELLA: Objection. I'm
3 sorry, I feel like you're drawing this
4 objection, but don't answer it anymore. We're
5 done with this. I can point to the Court to
6 hours of this question over and over again.
7 And we're not doing it anymore.

8 MR. HILL: Are you instructing him
9 not to answer?

10 MS. CANNELLA: Yes, I am. It's
11 five o'clock. We've been going for -- since
12 ten o'clock this morning and we've had many,
13 many discussions about this exact topic.

14 MR. HILL: That's great. We'll
15 take it up with the Court. We've had hours of
16 discussions about it because he refuses to
17 answer the question, but that's fine.

18 MS. CANNELLA: I've even answered
19 it for you. I've rephrased -- rephrased what
20 he said. So I don't know what else you want,
21 Mr. Hill. This is a wild experience.

22 MR. HILL: It's...

23 Q. How can you independently verify

1 that HVE -- that your HVE simulation in this
2 case is accurate? Is there any way you know of
3 other than citing to the fact that you believe
4 there's articles that say it's a proper
5 software for this application? Is there
6 anything you can do beyond what you've read or
7 what others have said in order to test or
8 verify that your simulation was accurate?

9 A. This is a tool that we commonly
10 use. It's generally accepted in the industry.
11 I'm using it simply as it would normally be
12 used in accident reconstruction to demonstrate
13 a -- a crash, to simulate a crash. There is
14 nothing special about what I'm doing. I've got
15 the shape of the vehicles. I have the crush
16 stiffness for the vehicles that came with the
17 program. I'm hitting it at a known speed. And
18 i'm producing a known delta-V. It is -- unless
19 you call into question the whole program, which
20 it's been used for -- I've been using it for 30
21 years and never had a problem using it or
22 having it utilized. I did vet it before I used
23 it. I made sure it was appropriate. There's

1 other programs that I might use for other types
2 of things. You know, you're -- it's kind of
3 like what you did earlier when we were asked
4 about how can you tell where an impact was.
5 You look at maximum engagement crush. Well,
6 that's what we use. We don't get to the
7 vehicle's hit. We use maximum engagement crush
8 and we follow generally accepted principles.
9 It's generally accepted to use computer
10 simulations like HVE, S-Mac, SIMON in the
11 industry. It's one of our normal calculation
12 tools just like a calculator is a normal
13 calculation tool. If it had not been generally
14 accepted, then I wouldn't be using it. But we
15 did it by hand or on a calculator. We got a
16 crush level. Then we did it with a simulation
17 program. We got different results. And for
18 mine I'm using the higher of the two. I'm
19 using it as just an alternative calculation
20 methodology, which is appropriate. So I
21 believe it's reasonably accurate. Not
22 perfectly, but I believe it's reasonably
23 accurate for what it was designed to be used

1 for. And I think that if we -- if I go do the
2 research, I'll find plenty of papers that show
3 that to you. I've been using it for 30 years.

4 Q. Are there any other simulation
5 software programs you could use other than HVE?

6 A. Let's do something else.
7 Mr. Grimes, I think, claims to be an instructor
8 in it. Who is he instructing -- if it's -- if
9 it's not a valid tool for accident
10 reconstruction, why is he using it? Why is he
11 instructing it? It's -- he's used it. He
12 knows it's valid. It's a good tool for the
13 purpose. His only complaint was that it was an
14 override. I can show you why it's not an
15 override. It's clearly not an override. And
16 if -- if you take his objection away that it's
17 an override, then he is as far as I can tell
18 agreeing to use it because he had no other
19 objection in his deposition to it.

20 Q. All right. Did you see his
21 testimony where he unequivocally testified that
22 HVE is not an appropriate software to use in a
23 situation like this where you have a complex

1 crush situation? He clearly gave the opinion
2 that when he teaches classes on this, he
3 instructs people not to use it in this
4 environment?

5 A. Well, that's a conversation you
6 and him had because he didn't say that under
7 oath in the deposition.

8 Q. I would ask you to go back and
9 read it. Are you aware of any other simulation
10 software that you could have used to run your
11 simulations in this case?

12 A. No.

13 Q. Okay. And I want to go back to my
14 question, and this is different. It's -- I
15 understand all of your basis to believe that
16 HVE is an appropriate simulation tool for you
17 to use to test your hypothetical crash at a
18 different height. I understand all of that.

19 My question is, is there any independent way
20 for you to verify that your simulation in this
21 case was accurate?

22 A. Well, is there an independent way
23 for me to verify that the hand calculations we

1 do every day that are based on the works of
2 Campbell and others in the past, well, I'd have
3 to go back and do all of the work. That --
4 that groundwork has been laid by others,
5 otherwise this simulation program wouldn't
6 be -- having been used by me for 30 years and
7 others in the industry, like Mr. Grimes. I'm
8 not going to go back and redo all of the
9 validation of the program. That's been done
10 by others. Just like the crush calculations
11 that we normally do are and the methodologies
12 that we use in the book over there. The book
13 behind me says HVE is a robust method. You
14 know, I'm -- I'm using a tool that's generally
15 accepted in the industry in a way that's
16 generally accepted in the industry. I don't
17 know what else I -- I mean, I'm not going to go
18 back and -- and redo all of that history of
19 work and research. And I've paid people to
20 train me in using it.

21 Q. Do you know whether you can run
22 a -- other HVE simulation and compare it to
23 yours and use that as a way to validate the

1 accuracy of your simulation?

2 A. Oh, that's -- that's like --
3 that's a broad, broad can of worms. You know,
4 I -- there's -- there's about 400 answers to
5 that question. I'm not sure what you're --
6 what you're poking at.

7 Q. All right. I'll put it this way.
8 If we ran an actual crash test and we ran it
9 identical to your simulation in this case where
10 the speeds were identical to your simulation,
11 the weights, everything was identical, the
12 impact point offset identical, what should the
13 result of that actual crash test be? Should it
14 mirror your simulation?

15 A. It should be whatever the answer
16 is.

17 Q. So you can't --

18 A. The simulation --

19 Q. -- state whether -- I'm sorry. I
20 thought you finished.

21 A. The simulations is -- all
22 calculations are simulations. All simulations
23 are approximations of reality. The -- the

1 results of the test would be the results of the
2 test if someone would do it that way. And then
3 you'd have those results, and you wouldn't need
4 the simulation.

5 Q. Okay. And so if the results of
6 that actual crash test were different than the
7 simulation, you would defer to the actual crash
8 test, and you wouldn't need the simulator?

9 A. If it was as you said, yes.

10 Q. Okay. And if it varied from the
11 actual crash test, would that be evidence to
12 you that the simulation was not scientifically
13 reliable in predicting the real world crash?

14 A. No. A simulation is exactly that.
15 It's a simulation. It's -- it's not the real
16 world. If you could actually -- and let's just
17 be clear here, you are not referring to the
18 test run by Grimes and --

19 Q. No, I'm not.

20 A. Okay. So if someone were to
21 actually do one along the certain path, it
22 wouldn't invalidate the simulation because the
23 simulation is -- is what it is. It's an

1 approximation of reality. It's not reality.
2 But if you had reality, you would use reality.

3 Q. Okay.

4 MR. HILL: All right. I believe
5 that's all I have. Thank you, Mr. Buchner.
6 Sorry if we got a little testy there. That's
7 normally not my style. But I -- I apologize
8 for that. And I -- I know in the future I will
9 try to avoid that. It was a little bit of
10 making sure you heard me and a little bit of
11 frustration. I appreciate your time, and --
12 and thank you.

13 THE WITNESS: Wimbledon is going
14 on right now, and those -- those competitors
15 are intense and they do their job well and then
16 they shake hands at the end. I'm -- I'm more
17 than happy to have talked to you today.

18 MS. CANNELLA: Can we take a break
19 and let me just see if I have anything?

20 MR. HILL: Sure. I need to use
21 the restroom anyway. So...

22 THE VIDEOGRAPHER: The time is
23 5:19 p.m. We're now off the record.

1 (A break was taken.)

2 THE VIDEOGRAPHER: The time is
3 5:34 p.m. We're back on the record.

4
5 EXAMINATION

6 BY MS. CANNELLA:

7 Q. Mr. Buchner, did you do the work
8 that's reflected in your May 2024 report to
9 formulate new opinions or to show the work and
10 how you developed opinions in your original
11 report?

12 A. Our amended report was just to
13 provide the basis for the opinions that were
14 already given. There aren't any new opinions
15 in there. It was just -- just trying to make
16 sure we had the supporting materials.

17 Q. And did your opinions base -- did
18 your opinions change based on what was
19 disclosed in May?

20 A. No.

21 Q. All right. When you were talking
22 about working in the simulation files, can you
23 explain when you run a simulation and you run

1 different iterations of it, is that akin to,
2 like, editing in a document? Like, in other
3 words, when you run a simulation, do you create
4 a new -- well, strike that. That's a bad
5 question.

6 When you run a simulation, are you creating
7 a new thing or are you just editing the -- the
8 inputs that are on the program?

9 A. Well, you have to open it. And
10 then once you open it, if you're typing a
11 letter, every paragraph you type is new. It's
12 not -- it's -- just every keystroke is new.
13 You have to build it and work through it. Same
14 thing with simulation. You have to start with,
15 you know, opening it up, getting the vehicles
16 imported, positioning the vehicles, telling the
17 program what speeds to use, updating the --
18 it's just an ongoing typing process, you know,
19 that doesn't -- you know, you just keep -- keep
20 inputting the data until you get it all in
21 there. And it runs using the proper data, and
22 then you save it.

23 Q. So if we were to equate it to

1 using a Word software and, you know, we were
2 editing a document as we go along, we could
3 just delete a paragraph or rewrite a paragraph,
4 for example, we haven't created an entirely new
5 document when we do that; we're just editing
6 that document?

7 A. Right. That's the way it works.

8 Q. Okay. So you're kind of inputting
9 different data points or assumptions and then
10 seeing what happens in the outcome?

11 A. Well, right. You're -- you're not
12 necessarily putting in different assumptions.
13 You're -- you're trying to get the data
14 properly input, but it takes time to do that.
15 You do make mistakes too. I mean sometimes the
16 car goes backwards because you've got the
17 velocity stuck in the wrong way. So you got to
18 fix that problem.

19 Q. Were any files deleted that you
20 know of?

21 A. No. Other than the -- somehow
22 the -- the original run file or the final run
23 file, I can't get it. I don't know where it

1 is. But there's no intent to delete any files.
2 It's just updating and keep running. Every now
3 and then a backup will get made or something
4 like that. We're still just working on the
5 same file.

6 Q. Right. Okay. The -- there was
7 some discussion about how much -- or that the
8 fluid had leaked out of the radiator in the
9 subject -- in the subject F-250 when you
10 weighed it, and the weight of the glass that
11 was broken, and so there was some broken shards
12 in the car and some broken shards out of the
13 car. Can you talk a little bit about
14 differences in weight and when there's kind of
15 a tipping point of -- of how much weight
16 matters when there's variations like that?

17 A. Well, the vehicles weigh thousands
18 of pounds. You know, we normally don't even
19 consider the -- the change of weight in a gas
20 tank to be particularly critical. And but as
21 far as glass and, you know, radiator fluid,
22 that's -- I don't know that I've ever added
23 water in for a leaking radiator fluid because

1 it's -- it's, you know, 20 to 30 pounds worth
2 of fluid usually. To a big F-250, maybe it's a
3 hair more. But our calculations are not that
4 precise. We're -- we're looking, you know, for
5 a reasonable answer.

6 Now, we did weigh the vehicles, so it means
7 we are very close to the weight of the
8 vehicles. It's much better than using
9 specifications. When you use specifications
10 they have one weight for virtually every
11 vehicle that was made that year, you know.

12 So -- it's -- it's -- we've already started out
13 being more accurate because we actually have
14 the vehicles with the various -- the type of
15 battery. The type of battery can change the
16 weight of a car. We don't ever change the type
17 of battery. But we weigh the car with the
18 battery that's in it, in it. So you know,
19 changes of a few hundred pounds usually are
20 inconsequential. If we think they are
21 consequential, then we'll be, you know, will be
22 more robust. Usually a few hundred pounds is
23 -- is inconsequential.

1 Q. The differences that the
2 Rough Country lawyer asked you about between
3 the HVE and the subject wreck or subject
4 vehicles include the fact that the HVE didn't
5 have a sunroof in that design using -- and I
6 think you spoke to this to some degree, but
7 using the sunroof or the -- the vehicle without
8 the sunroof would actually make the results of
9 your analysis less favorable to Plaintiffs.
10 Correct? In other words, it would mean -- it
11 would mean that there would be more crush in
12 the HVE than if you used a structure that had
13 that extra support in it?

14 A. Well, HVE does not have the
15 capability to include or exclude a sunroof
16 specifically. What it -- the way it's included
17 is with the crush stiffness coefficients. So
18 you know, we would -- so that's actually a
19 user -- we can put one in that looks like it's
20 got a sunroof. But HVE is really using the
21 data from crash tests or the crush stiffness
22 coefficients derived from past accidents or
23 crash tests to -- to -- to do a calculation

1 model. It doesn't -- we tell it about those
2 things. The program doesn't know about those
3 things. But to know whether or not our data
4 included a sunroof or not specifically, we'd
5 need to go back -- you'd have to go back to the
6 original crash tests and things. But in this
7 case, HVE has the number in there. It's robust
8 enough for what we were doing with or without.
9 But if I were going to run a crash test, I
10 would try to get the same vehicle and use it
11 because the roof does get involved in a crash
12 test.

13 Q. The -- I was sitting here trying
14 to think when I've seen HVE used by automakers.
15 And have you seen automakers use HVE to
16 simulate NTSA, federal FMVSS testing, dynamic
17 testing?

18 A. Yes. Yes, I've seen studies done
19 using it to try to predict what will happen
20 in -- in accidents or crashes of -- of designed
21 like various crash test and whatnot.

22 Q. Okay. And the government
23 accepts -- accepts the certifications based on

1 HVE-type testing?

2 A. Right. The government doesn't
3 require a crash test. They just require the
4 manufacturer to certify that if they do, do the
5 crash test, it will pass it. And the
6 manufacturers have lots of tools at that. And
7 HVE is one of those types of tools, just like
8 the government has HVE available to do a study
9 if they want to avoid all of the expenses of
10 doing actual crash testing. So I'm pretty sure
11 all of that is common in the industry. I
12 didn't pull any reference to that. I didn't
13 expect that to be an issue here. But yes, it
14 can be used for those types of things. And in
15 my opinion, it has.

16 Q. Okay. And I'm going to mark the
17 visual that Rough Country showed you as
18 Plaintiff's Exhibit 1 to your deposition. I
19 can share my screen and pull that up. One
20 second. Okay. Can you see that?

21 (Plaintiff's Exhibit Number 1
22 is marked for identification.)

23 A. I can.

1 Q. All right. And so we'll mark that
2 as Plaintiff's Exhibit 1.

3 MS. CANNELLA: That's all I have.

4 MR. HILL: That's all the
5 questions you have, you said?

6 MS. CANNELLA: Yes.

7 MR. HILL: All right. I've just
8 got one quick follow-up based upon what you
9 just asked.

10

11 EXAMINATION CONTINUED

12 BY MR. HILL:

13 Q. In this case, Mr. Buchner, do you
14 intend to give any opinion as to whether
15 Rough Country could have used HVE prior to this
16 incident to simulate crashes involving vehicles
17 with their lift kits in place?

18 A. I know they could have considered
19 it. I don't know if they could have. I'd have
20 to do a little consideration and come up with
21 an exact answer. But it's one of the tools
22 that is available for consideration, yes.

23 Q. I believe you've testified that

1 you did not use HVE to simulate the actual
2 crash in this case because the override would
3 prevent the program from being designed as
4 used, which is when there's bumper-to-bumper or
5 structure-to-structure impact.

6 MS. CANNELLA: This is outside the
7 scope of the supplemental report.

8 Q. Go ahead.

9 A. That's not exactly --

10 MS. CANNELLA: There's no
11 question.

12 A. Okay. I don't think that that's
13 what I said, but thank you.

14 Q. Well, was there any testimony that
15 you gave in your original deposition regarding
16 the usage of HVE that you intend to change
17 based upon your supplemental work in this case
18 and since the time of your first deposition?

19 MS. CANNELLA: Object to the form
20 of the question. It's vague.

21 A. Yeah, I -- I actually haven't -- I
22 can't tell you exactly what I said in the first
23 deposition.

1 Q. Right. But as we -- go ahead.

2 Sorry. I thought you were finished.

3 A. I did the best I could to answer
4 the questions at the time. But I don't -- I
5 don't have any comments one way or the other as
6 I sit here.

7 Q. Okay. And how -- how do you
8 define a couple hundred pounds? Just to make
9 sure there's no discrepancy there, in answering
10 those -- in all those questions, I believe you
11 said a couple hundred pounds this way or that
12 way is not a weight that would concern you.

13 What -- what is a couple hundred pounds?

14 A. I thought I actually said a few
15 hundred pounds.

16 Q. Yeah. So what's a few. Yep.
17 Thank you for correcting me.

18 A. Just starting out for vehicles of
19 this size, you know, 300 pounds -- if it was
20 getting close to 300 pounds, I might start
21 worrying about it. But you know, I don't -- in
22 this case we tried to get the -- the weights
23 more accurate. That's why we weighed it. I

1 had those vehicles weighed. I made sure they
2 were weighed so we had the best starting point
3 we could. So little things like a lit bit of
4 radiator fluid is -- is inconsequential.
5 Because if you just use the specs, you don't
6 know how far off you are when you're starting.
7 The specs are -- in my experience, with all the
8 number of vehicles that I have weighed, I've
9 had them off over a thousand pounds. So you
10 know, in this case I wanted it close. I wanted
11 it within, you know, one or two hundred pounds
12 for sure. So we -- we weighed them and then
13 added in reasonable weights.

14 Q. Sure.

15 A. But I don't have an exact number.
16 But we're -- we're close enough for what I've
17 done it -- for the work that I've done. I'm
18 sure of that.

19 Q. Sure. So if the weights are
20 within 200 pounds, you would consider that to
21 be accurate enough -- accurate enough from a
22 weight perspective to properly test the
23 vehicles?

1 A. Yeah. But there's no -- there's
2 no one exact right answer. I mean, if it's
3 a -- if it's a motor scooter off by 200 pounds,
4 we've got a real problem. If it's a tractor
5 trailer off by 200 pounds, it's more than
6 irrelevant --

7 Q. Well, I'm talking about vehicles
8 in this case.

9 A. I know. I know. But we've got
10 one really big vehicle and one smaller vehicle.
11 So you know, the big vehicle, you can have much
12 larger discrepancies and it's irrelevant than
13 the smaller vehicle. So there isn't one answer
14 for this. We want to be close. We like to
15 be -- a hundred pounds I'm not even going to
16 bat an eye at. Two hundred pounds, that's
17 normal between experts to be off a couple
18 hundred pounds. I'm not arguing about that. I
19 don't think Mr. Grimes is either. He says our
20 weights are different but our weight ratios
21 are, you know, very close to the same. You
22 know, we have a depth of knowledge that's
23 greater than just 200 pounds is the go or

1 no-go. It's not a pass/fail. Get it
2 reasonably close. And at a few hundred pounds,
3 that's generally always reasonably close.

4 Q. Okay. Great.

5 MR. HILL: Thank you for your
6 time. That's all I have.

7 THE WITNESS: Okay.

8 THE VIDEOGRAPHER: Anything
9 further?

10 MS. CANNELLA: No.

11 THE VIDEOGRAPHER: All right.

12 This concludes the videotaped deposition.
13 We're off the record at 5:48 p.m.

14 MS. CANNELLA: Do you want to read
15 and sign?

16 THE WITNESS: I want to read.

17

18

19 (The deposition ended at 5:50 p.m. EST.)

20

21

22

23

Bryson, Santana and Joshua v. Rough Country, LLC

Page 310

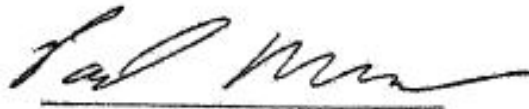
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STATE OF ALABAMA,

BALDWIN COUNTY,

I, Paul Morse, Certified Court Reporter
and Commissioner for the State of Alabama at
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foregoing proceedings was taken down by me by
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was produced in transcript form by computer aid
under my supervision, and that the foregoing
represents, to the best of my ability, a true
and correct transcript of the proceedings
occurring on said date and at said time.

I further certify that I am neither of
kin nor of counsel to the parties to the action
nor in any manner interested in the result of
said case.

A handwritten signature in black ink, appearing to read "Paul Morse", is written over a horizontal line.

Paul Morse, CCR

ACCR #588 Expires 9/30/24

Bryson, Santana and Joshua v. Rough Country, LLC

Page 311

1 Tedra L. Cannella

2 tedra@cannellasnyder.com

3 August 2, 2024

4 RE: Bryson, Santana And Joshua v. Rough Country, LLC

5 7/11/2024, G. Bryant Buchner (#6793607)

6 The above-referenced transcript is available for
7 review.

8 Within the applicable timeframe, the witness should
9 read the testimony to verify its accuracy. If there are
10 any changes, the witness should note those with the
11 reason, on the attached Errata Sheet.

12 The witness should sign the Acknowledgment of
13 Deponent and Errata and return to the deposing attorney.
14 Copies should be sent to all counsel, and to Veritext at
15 cs-southeast@veritext.com.

16 Return completed errata within 30 days from
17 receipt of testimony.

18 If the witness fails to do so within the time
19 allotted, the transcript may be used as if signed.

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21
22 Yours,

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Bryson, Santana and Joshua v. Rough Country, LLC

Page 312

1 Bryson, Santana And Joshua v. Rough Country, LLC

2 G. Bryant Buchner (#6793607)

3 E R R A T A S H E E T

4 PAGE_____ LINE_____ CHANGE_____

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24 G. Bryant Buchner

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25

Bryson, Santana and Joshua v. Rough Country, LLC

Page 313

1 Bryson, Santana And Joshua v. Rough Country, LLC

2 G. Bryant Buchner (#6793607)

3 ACKNOWLEDGEMENT OF DEPONENT

4 I, G. Bryant Buchner, do hereby declare that I
5 have read the foregoing transcript, I have made any
6 corrections, additions, or changes I deemed necessary as
7 noted above to be appended hereto, and that the same is
8 a true, correct and complete transcript of the testimony
9 given by me.

10
11 _____
12 G. Bryant Buchner

Date

13 *If notary is required

14 SUBSCRIBED AND SWORN TO BEFORE ME THIS

15 _____ DAY OF _____, 20____.

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Bryson, Santana and Joshua v. Rough Country, LLC

[& - 250]

Page 1

&	100 82:9	17 52:19,22	57:10 58:22
& 4:11	101 256:17	54:20,23,23	59:8 66:6
0	10519 249:21	55:12 57:2,3	92:19
0.04 11:19	250:4,12	57:15 58:21	2024 1:18 5:12
52:11	10:00 5:7	59:19,20	6:11 7:2 27:18
0.1 269:9	10:15 5:12	251:21,22	46:12 53:2
0.35 67:1,2	11 1:18 5:12	252:1 278:2	141:23 146:13
0.45 52:12	202:10 231:15	17.00 53:6,23	178:1 296:8
0.5 162:2,4	238:14 256:8	54:18	311:3
0.7 67:2	267:1 269:1,2	17.92 39:5	21 257:2
0.8 38:22	11:13 61:10	170 79:13	23 8:1
0.9 269:8	11:28 61:13	178 3:14	2400 4:12
017 1:5	12 28:6 37:23	17:10 46:12	250 39:6 62:1
09348 7:3	54:12 60:23	18 213:19	63:3,23 65:8
09377 7:3	89:8 269:2	214:10	66:14,16 67:9
09487 251:8	12:15 89:12	18378 310:21	74:21 76:23
1	13 26:3 135:4,9	186 3:15	77:5,12,23
1	135:22 136:1,6	19 285:14	78:6,19,20
1 3:13 7:4,6	254:17 255:10	1991 285:14	79:4 80:13,17
201:21 303:18	14 105:21	1:03 137:5	85:12 88:3,9
303:21 304:2	146:12 178:1	1:13 137:8	88:13 95:16,17
1.1 100:6	15 255:6,6,13	1:57 176:10	99:4 104:18
1.25 207:1,6,15	150 202:1	2	151:22 152:6,9
1.42 206:23	16 199:2 207:3	2 3:14 178:1,8	152:18 153:2,4
207:4,15	220:12,14	238:7 311:3	160:11 161:14
1.5 202:2	226:8 228:19	20 96:2 255:4,4	162:19 178:7
10.9 202:10	229:12,20	258:4,20 300:1	179:14,15
231:13 237:13	230:13 231:19	313:15	181:17 206:18
238:13 256:7	232:4,6 236:6	200 307:20	206:20 208:11
261:21 262:8	237:21 238:22	308:3,5,23	208:16 209:17
263:7,15 264:9	248:14,16	2021 53:9	209:18 212:17
10.9. 225:5	249:3 251:5,13	58:21	213:23 214:8
237:14,16,19	251:13 263:14	2023 15:8 16:9	215:5 221:9
263:17 266:21	263:18	28:7 35:12	223:23 224:2,5
		37:23 54:14	224:16 229:22

[250 - absolutely]

Page 2

237:10 255:15 270:18 273:6 299:9 300:2 250's 152:23 251 3:16 29 77:2,10 296 3:6 2:07 176:13 2:15 183:1 2:18 183:4 2:22 1:5 2:33 195:18 2:56 195:21	4 4 3:16 251:10 400 293:4 43.9 161:16 162:2 164:8,8 164:9,21 43.9. 170:23 44 163:13,21 164:20 165:4,7 171:1 45 100:17,18 101:8 132:4 144:19 150:20 220:14 49.9 100:4 101:22 163:8 163:23 164:8 171:2 4:11 260:16 4:39 260:19	5:19 295:23 5:34 296:3 5:48 309:13 5:50 309:19 5a 179:7 5b 178:22 179:7 200:2	9406 200:1 206:4 9407 206:2 9454 193:13 9459 188:19 9499 254:21 9501 255:13 9506 258:5 9508 251:8	
3	3 3:15 186:7,9 3,410 82:21 30 285:14 288:20 290:3 292:6 300:1 311:16 300 306:19,20 30030 4:16,20 303 3:17 30326 4:12 304 3:7 315 4:15,19 3344 4:11 3a 177:17 196:3 3b 178:3 3d 73:20 178:15 198:21 198:22 241:11 271:20	5 5.92 207:10 50 162:17 164:8 50s 161:16 51 88:9,14 100:5 103:1 162:18 163:1 163:11 164:10 164:15,18 166:14,21 167:4 168:14 171:19 588 310:23	6 6 3:5 206:2 238:7 6793607 311:5 312:2 313:2	a a.m. 5:7,12 61:10,13 ability 14:22 145:3 233:11 310:11 able 6:21 41:7 41:9 93:12 103:14 110:12 140:13 145:18 152:17,19,20 156:10 185:17 187:3 191:21 217:5 237:19 267:2 276:1,20 above 5:8 33:9 34:19 73:23 188:16,22 196:6,9 209:16 221:19 224:3 246:1 310:6 311:6 313:7 absolutely 143:22 174:15 191:14
		7 7 3:13 7/11/2024 311:5 75 201:15,21 75th 201:17		
		8 8 6:11 7:2 46:12 48:1 53:2 58:9 141:23 8,040 78:21 80:20 885 4:16,20		
		9 9/30/24 310:23 9349 37:19 9376 72:13,16 94 225:18 9401 161:5 9404 183:7		

[absorbing - actually]

Page 3

absorbing 110:3	149:18 150:4,8 150:8,11,14	290:9	acknowledge... 313:3
absorption 153:3	151:13,15 153:15 154:1	accidents 109:18 136:2 139:14 143:21	acknowledg... 311:12
acceptable 285:15	154:20 155:10 155:20 157:10	150:9 301:22 302:20	acting 5:2
accepted 288:10 289:8,9 289:14 292:15 292:16	157:13 161:10 161:13 162:17 163:21 164:9 165:4,7,13,16 166:1,9,21,23 168:2 169:20	account 75:18 79:11 80:12 81:14 84:14 85:3,3,12 91:12 207:19	action 310:15
accepting 182:19 204:6	170:1,14,16 171:1 172:5,9 172:18,20	accounted 81:7 84:20,21	actual 17:2,5,8 17:23 29:20 33:12 37:11 49:4 62:15 75:19 79:22 108:15 113:6 117:23 148:18 166:9,23 168:2 169:20 170:14 170:18,19 171:21 172:8 173:2 200:21 211:9 212:2 249:5 250:17 250:19 251:7 257:11,19 262:7 263:3,4 264:15,16,17 265:7 282:23 293:8,13 294:6 294:7,11 303:10 305:1
accepts 302:23 302:23	173:2 177:15 179:16 180:4,6 180:13,14 185:19 193:12 200:16 201:3 204:14 246:18 246:19,21 247:12 251:23 252:6 253:1 254:5 255:8,14 255:16,23 256:2,11,16 257:12,20 258:21 259:13 261:2,3 262:19 264:4,5,7 265:2 270:16 275:15 277:8 281:15,20 286:4 288:12	accr 310:23	actually 14:7 15:17 16:8,15 17:8 22:2 30:9 31:2,8 33:11 34:7 47:2 53:16,21 68:13 68:18 79:18,22
access 33:12,19		accuracy 276:23 293:1 311:9	
accident 9:20 42:11 43:4,12 75:19 76:19 81:4,19 83:17 84:11 85:8 88:14 93:14 94:20 95:22 101:5,6 102:20 106:21 107:8 107:21,23 108:4,5,19,19 109:1,14 114:14,23 118:16 119:10 119:11 121:2 122:21 123:18 124:1 130:2 132:3,4 133:15 135:23 136:18 147:13,18,23		accurate 16:19 22:3 37:10 39:3,17 41:20 43:16 46:22 50:20 51:4,12 51:13,14,15 123:8 129:15 140:11 219:14 243:12 263:10 267:3 271:10 279:1 280:20 283:16 288:2,8 289:21,23 291:21 300:13 306:23 307:21 307:21	
		accurately 51:22 215:14	

[actually - analysis]

Page 4

81:21 82:14	276:4 281:7	263:21 277:20	allegation
84:23 86:6	additions 313:6	282:17 284:23	106:3
87:13 102:12	addressed	agreed 2:1,8,16	alleged 276:3
114:17 120:6	284:21	50:3,14 161:3	allotted 311:19
122:10,15	adjust 56:13,14	agreeing	allow 79:10,17
132:1 133:3	adjustments	284:22 290:18	91:18 207:23
139:5 142:1	31:13 46:21	agrees 154:14	215:12 216:2
143:23 148:7	admissible	ahead 29:11	allowed 97:20
148:19 153:4	138:18 139:10	102:6 108:2	allows 136:5
156:1 163:10	140:4	111:21 112:3	285:3
163:18 166:11	admit 138:15	114:3 116:6	alluded 23:13
167:15 174:22	admits 114:23	117:18 120:19	24:11 50:8
177:2 180:10	advantage 88:3	124:17 131:21	alternative
194:10 199:5	150:19	132:14 140:21	289:19
200:16 220:8	advise 34:23	176:15 224:6	amended 7:8
222:1 230:5	affect 131:22	229:3 240:20	7:12,14 15:6
233:9 246:23	affects 118:21	251:6 279:9	30:19 51:20
255:11 265:17	aggressiveness	281:13 283:5	52:4,15 61:19
266:10 273:10	138:2	285:9 305:8	66:15 84:5
274:12 294:16	ago 86:7 112:5	306:1	85:21 142:7
294:21 300:13	192:1,8	aid 186:21	249:17 280:7
301:8,18	agree 57:6	310:9	296:12
305:21 306:14	58:17 77:1	air 129:11	amount 51:5
add 79:13 83:2	84:12 92:22	akin 297:1	80:22 148:18
205:10	96:4 99:5,16	al 1:7	163:16 168:11
added 79:2	100:8,13	alabama 5:2	168:14 201:14
80:5 85:16	108:10 122:6	310:2,5	201:21
193:23 206:14	123:22 125:7	align 202:5	analyses 213:1
227:13 299:22	140:12 141:1	aligned 204:1	analysis 9:3,5
307:13	143:17 154:1	235:22 236:16	43:12 88:5
adding 40:21	162:15 176:8	236:20 237:6	102:12 107:9
212:21	179:14,23	alignment	108:12 111:15
additional 59:9	181:3,16,23	201:9 228:5	116:12 119:12
79:11 146:18	191:5 212:4	230:7,8	119:13 127:15
251:19 262:19	213:13 233:6,9		129:9,22,23

[analysis - appreciate]

Page 5

132:23 134:12 134:15,18 135:21 148:12 156:10 184:3 210:22 211:2 212:16 213:10 214:8,14 216:15 217:13 237:16 264:6 277:9 281:22 282:4,6 286:14 301:9 analyze 108:11 108:15 143:5,6 206:9 256:20 286:22 analyzed 119:7 245:18 analyzing 108:18 122:3 135:23 144:4 183:17 186:16 209:10 anchored 236:23 237:23 angle 250:6 animal 109:1 answer 16:23 29:13 30:6,13 36:19 40:6 41:2,3,4 47:10 49:13,17 50:13 50:19,23 64:18 65:14 95:2 102:15 105:15	111:13 117:4,9 117:11 118:22 119:3,15,23 120:1,11,13 121:12,14,16 121:18,18,20 121:22 123:14 124:7 125:2,6 126:1,3 127:9 130:15,20 132:6,12,17 133:4,7,12,14 133:23 134:5 134:14,17,23 135:6 136:10 136:12 137:18 137:20 140:6,9 140:22 143:13 144:13 145:2,3 146:2 154:13 164:11 165:22 166:6 204:7 217:16 262:16 267:20 278:5 279:9,10,14,17 279:19 287:4,9 287:17 293:15 300:5 304:21 306:3 308:2,13 answered 111:19 112:2 120:18 124:3,5 124:16 126:23 133:10 134:7,8 134:9,16 135:5	140:20 141:8 144:8,11,15 146:7 151:9 218:8 257:21 278:4,6 280:15 281:14 287:18 answering 116:20 127:12 180:3 265:5 306:9 answers 10:19 12:3,4 38:10 56:8 116:11 130:9 134:13 283:15 293:4 anticipate 60:9 anybody 25:23 26:14 27:6 43:21 45:7 129:2 anymore 67:19 268:16 287:4,7 anyway 295:21 anyways 70:1 172:16 188:11 apart 226:8 229:20 231:16 232:6 236:6,7 apologize 101:8 128:3 137:14 176:4 184:16 234:13 255:12 295:7 apparently 9:6 215:23 248:19	276:9 appear 77:17 appearances 4:9 appearing 4:13 4:16,20 appears 66:12 193:14 251:12 270:12 appended 313:7 appendix 46:9 46:12 74:3 78:15 apples 100:18 103:15,15 165:1,1,2,2 170:11,12 applicable 283:11 311:8 application 288:5 applications 145:14 applied 65:15 65:16 94:10 applies 113:5 149:5 apply 167:22 283:8 appreciate 15:3 119:15 121:14 137:17 138:6 216:12 295:11
---	---	--	---

[approach - auto]

Page 6

approach 121:23 171:23 250:6 appropriate 12:11 101:21 130:3 136:7 172:4 173:10 278:12 288:23 289:20 290:22 291:16 approved 62:8 62:17,19 approximate 20:15 41:3 47:13 87:14 273:5 approximately 77:9 86:9 87:3 103:14 201:22 207:12 208:8 256:7 266:17 269:2,2 approximation 85:6 201:19 295:1 approximatio... 293:23 arc 192:21 193:8 272:13 272:23 273:4,6 architect 133:3 archived 42:5,6 42:19 43:23 archives 9:18	area 122:22 123:2 177:18 177:19 255:17 areas 175:14 256:13,14 argue 60:19 143:9 152:16 221:22 arguing 308:18 argument 118:9,17 143:14,16,19 202:19 204:19 204:21 224:15 arrange 117:6 arrogant 117:8 arrow 251:22 255:21 artfully 16:3 article 111:2 articles 288:4 aside 18:12 42:14 250:5 asked 10:20 29:19 49:15,17 64:16 65:9,13 65:18 86:15 98:11 111:19 112:2 113:16 115:19 120:17 123:6 124:2,5 124:16 126:23 133:10 134:6,8 136:15 140:19 141:8 142:13	175:5 180:4 218:8 232:16 240:14,15 241:7 257:21 266:15 278:3 280:3,15 289:3 301:2 304:9 asking 70:22 71:9 76:8 89:19 107:8,9 107:10,16 113:10 114:5,9 116:11 117:7 119:11 124:19 125:10 128:22 128:23 130:15 130:20 132:11 132:13,15 133:4,6 141:10 141:18 142:10 145:9,15 146:6 148:1 169:11 170:6 182:2 191:12 259:16 261:23 277:12 277:13 280:23 281:5 282:3 283:10,20,21 283:22 284:5,7 284:22 assign 2:13 associated 8:22 22:3,11,17 27:10	association 249:8 assume 101:16 162:5 249:14 assumed 162:3 assuming 78:21 82:20 102:1 assumption 166:7 assumptions 298:9,12 atlanta 4:12 attach 177:22 attached 311:11 attachment 155:8 attempt 6:13 48:23 130:10 191:16 attempted 39:21 139:9 attempting 91:15 attempts 37:22 42:5 137:18 attorney 5:17 248:15 311:13 attributed 275:21 276:12 august 28:22 28:23 58:21 311:3 auto 109:20 139:17
--	---	---	---

autocad 241:9 automakers 302:14,15 av 66:9 110:3 available 55:19 66:6 68:21 98:16 112:9 113:12 303:8 304:22 311:6 avenue 4:15,19 avoid 295:9 303:9 aware 44:15 58:20 59:10 73:3 92:17 138:17 139:4 282:13 291:9 axle 142:3	185:12 186:6 186:13 195:21 201:5 213:23 218:2 219:2 220:22 221:21 222:20 230:15 234:17 235:22 237:11,17 240:3 244:16 260:19 261:16 264:2 265:17 267:3 274:3,6 291:8,13 292:3 292:8,18 296:3 302:5,5 backup 15:13 17:13,17 21:4 299:3 backwards 184:19 298:16 bad 6:18 13:9 43:8 297:4 baker 75:6,10 baldwin 310:3 base 18:11 296:17 based 13:17 15:9,10,19 19:5 41:8 60:15 67:7 70:9 75:23 82:5 107:7 112:11,17 142:4 145:14 145:16 147:14	161:5,17 163:10 165:7 166:6 169:5,12 169:14 176:20 176:21 192:4 195:2 206:9 208:5 213:4 214:14 216:16 217:2 246:1 247:6 264:9 271:19 274:15 276:21 281:4 292:1 296:18 302:23 304:8 305:17 basic 115:3 basically 8:4 40:3 42:14 57:19,21 101:2 115:3 159:14 167:9 182:8 211:22 261:19 basis 151:21 204:18 218:7 224:15,18,23 225:12,14 232:20 243:6 248:1 255:20 264:13 269:6 285:1,6 291:15 296:13 bat 308:16 bates 7:3 37:18 161:5	battery 300:15 300:15,17,18 beauty 200:9 beginning 5:6 161:5 177:23 237:7 begins 177:7 behalf 4:13,17 4:21 5:19,21 97:18 belief 12:16 23:17 28:21 47:8,9 162:19 166:1 188:20 192:4 believe 26:3,9 47:5 48:3,21 52:19 63:5 77:1 78:15 79:22 86:13 87:11 116:1 120:15 124:13 156:8 162:16 169:22 178:5 188:16 189:8 189:19 190:16 196:7 206:3 208:6 223:4 224:12 264:13 268:23 269:1 288:3 289:21 289:22 291:15 295:4 304:23 306:10
---	---	---	---

believed 22:1 38:7 162:17 191:16 264:8 benefit 113:7 170:17 bent 237:5 252:22 best 14:22 29:8 47:10 58:6 73:11 87:17 88:16 160:8 187:8 213:3 221:23 238:9 267:19 306:3 307:2 310:11 better 34:2 176:7 254:8 258:12 265:5 267:4 300:8 beyond 38:21 41:22 78:11 93:13 103:10 152:9 274:19 284:13 288:6 big 130:23 139:6 140:6 168:11 202:2 300:2 308:10 308:11 bigger 192:15 241:21 248:23 biomechanics 158:11 bit 54:13 63:6,7 63:8 84:11	153:8 158:18 181:8 187:21 189:15 192:15 238:7 252:20 254:18 272:9 272:10 273:1 295:9,10 299:13 307:3 black 110:14 112:12 113:12 166:23 169:21 234:13,23 254:18 blaming 26:14 blank 30:3 248:12 blanket 113:13 127:4 blind 284:5 block 113:4 blue 194:13 body 74:23 76:5 bolt 252:3,7,8 bonus 43:8 book 21:22 292:12,12 books 256:11 bottom 9:14 82:18 187:17 193:22 202:20 224:1 234:8 235:16 254:4 257:4 258:6 263:12 272:12	272:22 273:4,5 box 82:12,14 110:14 112:12 113:4,12 166:23 169:21 240:13 bracket 256:23 256:23 257:5,9 257:11,18,23 brackets 153:3 153:9,14,17 brakes 164:17 168:7 braking 161:17 162:2,3,6,6,9 162:16 168:12 brand 121:1 break 61:4,5,11 88:18,19 89:4 89:10 136:19 136:20 137:1,6 138:13,15,16 159:7 176:3,11 182:17 183:2 195:14,19 235:8 260:4,17 295:18 296:1 brennan 32:5,8 bring 121:4 126:14 174:2 bringing 126:15 210:6 brittle 159:7 broad 17:16 113:10,17	293:3,3 broken 84:11 299:11,11,12 brought 103:21 103:21 bryant 1:17 5:7 5:14 6:4 240:21 248:11 250:11 279:11 311:5 312:2,24 313:2,4,12 bryson 1:7 5:22 7:3 157:21 158:15 251:8 254:21 255:13 258:4 311:4 312:1 313:1 buchner 1:17 5:7,14 6:4,10 88:20 95:2 119:16 137:10 141:14 256:4 260:21 295:5 296:7 304:13 311:5 312:2,24 313:2,4,12 buchner's 3:13 49:19 build 242:7 297:13 builders 242:7 building 24:16 32:19 built 199:21
--	--	---	---

[bullet - cannella]

Page 9

bullet 202:3,4 203:3 bumper 76:23 90:20,21 92:3 92:14 93:3,9 93:18,19 94:3 94:6,17 95:7,8 95:9,12,14,15 95:18,19 110:6 110:6,20,20 122:3,3,9,9,22 123:23,23 124:10,10 126:17,17,18 126:18 147:16 147:18,18 150:18 151:23 151:23 152:3,3 152:3,3,6,9,10 152:16,16,20 152:23 153:1,4 153:4,5,11,11 169:23,23 172:6,6,22 175:17 179:23 180:10,11,15 180:15 203:8 203:13 252:18 252:22 253:8 253:11,12 254:1,2,4,11,12 254:20 256:19 257:1,3,11,14 257:19,23 258:5,8,13,15	285:11,12 305:4,4 bumpers 94:5 118:14 153:6 bunch 83:23 250:7,7 buried 230:22 business 106:23 busy 13:3 button 33:2 buy 112:22	130:6 165:8 275:14 282:21 283:18 291:23 292:10 293:22 300:3 calculator 289:12,15 calculators 282:13 calibrate 207:11 call 7:8,11,11 131:23 143:15 146:14 148:18 176:16 198:22 226:11 249:12 251:13 288:19 called 153:17 153:18,20 202:3,4 249:13 calling 232:7 calm 125:21,22 camera 159:11 208:2 218:16 244:17 cameras 156:3 156:5,17 159:11,19 210:11 213:1 215:12 218:15 campbell 292:2 cannella 3:6 4:14,14,18 5:20,20 6:12 7:2 21:9 42:21	44:2 45:5 49:7 49:18 69:14,17 69:20 70:16 71:2,11,21 72:1,8 83:19 84:6 89:6 95:1 98:11 102:2 105:17 111:18 112:2 113:21 114:4 115:20 116:3 117:15 120:17,20 124:2,5,12,14 125:21 126:10 126:23 131:19 133:10,17 134:3,6 137:23 140:17 141:7 141:11 142:8 143:3,12,22 144:8,14 145:7 145:21 146:4,8 146:13 151:4,7 154:4 158:1 177:21 185:3,9 211:11 218:8 219:15 223:4,7 223:10 224:19 225:12 233:4 236:2 238:2 239:20 240:6 240:14,19 248:10 249:23 250:5,10,14,18 250:21 251:3
	c		
	c's 257:11 cab 63:4,4,9,12 63:13 64:17 65:10 74:23 75:1,2,19,22,23 76:5,5 calculate 205:13 233:11 265:9,11 275:20 calculated 170:23 calculates 110:7 178:19 calculation 281:16 289:11 289:13,19 301:23 calculations 24:15 64:9,10 64:11 76:9,13 76:14,15 130:5		

[cannella - change]

Page 10

257:21 260:5	45:21 59:16,23	ccr 5:1 310:22	certainly 72:4
260:13 278:3	60:5,5 80:3	center 95:12	101:12,12
279:2,6,10,18	93:1 94:5	160:20 181:7	107:20 108:9
280:14 281:12	103:2 108:15	182:9 190:2,5	111:8 155:9
283:3 285:7	109:15,22	190:11,14,18	238:16
287:2,10,18	110:13 111:16	190:19,20	certificate
295:18 296:6	127:19 128:4	200:8 204:2	310:1
304:3,6 305:6	128:12 136:16	206:18,21	certifications
305:10,19	139:12,23	207:1 209:20	302:23
309:10,14	145:15 163:14	210:9,12,15,18	certified 1:22
311:1	171:22 190:13	210:20,21	310:4
cannellasnyd...	190:15 269:7	211:21 212:5	certify 5:3
311:2	280:6 282:19	212:17 213:16	303:4 310:6,14
capability	288:2 291:11	214:10,14,18	cg 80:6 85:15
301:15	291:21 293:9	215:6 216:6,9	chainsaw 81:21
capable 133:8	302:7 304:13	216:11,14	81:22,23 82:2
133:15 134:1	305:2,17	218:4 221:18	chance 106:7
car 73:11 85:9	306:22 307:10	221:19 222:23	change 32:22
92:11 135:14	308:8 310:17	224:6,7,17	56:8 66:13,14
147:22 148:7	cases 27:5	225:6 226:7	67:15 106:12
169:2 203:8	59:21 195:1	229:5,6 230:12	107:11 115:14
219:2 221:4	casual 121:4	231:22 234:5	115:17,23
237:5,11	cataloged	235:18 236:17	120:8 128:12
253:12 298:16	115:6	236:21 257:8	129:3 135:21
299:12,13	catch 67:14	261:8,11	168:15 169:1
300:16,17	catching 235:5	272:13,22	196:19,23
care 31:15	caught 236:19	centered 221:1	197:19,20
career 139:8	cause 5:8 56:15	221:2,5,11	201:7 238:4
cargo 83:2,9	129:17 196:1	centerline	277:17 278:22
91:18 92:7	caused 158:15	159:21 160:18	280:7 284:9
99:13	276:3	161:1,2	286:9 296:18
cars 139:19	causes 104:1	certain 17:17	299:19 300:15
242:9	causing 204:11	21:3 79:3	300:16 305:16
case 1:5 27:4	caved 254:2	266:5 294:21	312:4,7,10,13
43:2 44:3,5			312:16,19

[changed - comfortable]

Page 11

changed 10:6 11:15 18:17 78:5 85:20 127:20 285:5 286:20 changes 35:19 52:15 57:5 77:17 78:7 96:20 101:9 300:19 311:10 313:6 changing 126:19 131:7 165:22 267:2 285:2 characterizati... 45:23 49:21 114:16 125:19 characterizing 280:1 chat 276:8 check 265:22 checked 11:7 266:21 child 99:22 choice 34:16 90:12 choose 38:11 73:13,19 90:9 205:8 chose 74:1 102:23,23 103:1 145:15 cite 111:4 129:16 138:16	140:2 173:9,20 260:22 citing 288:3 civil 5:4 claim 107:13 222:6 claimed 220:17 claims 96:19 290:7 clarified 170:8 clarify 20:13 34:7 87:4 153:13 clarifying 177:11 class 94:16 classes 291:2 clear 7:21 13:13 63:22 85:12,22 99:2 135:7 181:12 244:10 267:5 294:17 clearly 11:5,7 92:1 112:16 147:16 164:13 167:7 207:22 208:7 212:2 223:16 252:5 290:15 291:1 click 32:13 33:6 clicked 33:2 238:21 264:18 272:21,22	clicking 273:18 close 51:9 114:1 141:19 143:13 167:14 168:10 179:18 180:16 212:13 212:14 213:19 226:19 235:4 253:20 254:17 300:7 306:20 307:10,16 308:14,21 309:2,3 closer 63:20 182:9 231:2 269:12,13 cloud 198:23 217:15 226:7 226:15,17,23 227:10,20 228:1,2,7 229:6,7,15 240:23 241:12 241:19,19 242:6,17,19 243:5,19 244:1 244:3 245:4 261:1 263:12 263:16,20 264:10,19 265:2,7 271:5 271:13,15 clouds 227:19 227:19 266:23 268:8	coefficient 78:1 175:13,15 coefficients 62:2,19 63:15 63:16,23 64:17 64:20 110:4,18 285:19 301:17 301:22 cohen 99:23 157:21 158:15 collection 37:13 collinear 224:7 224:10,11,17 231:9,16 color 160:5 colorized 198:20 combined 271:16 come 34:16,17 59:1,10 62:23 65:19 66:11 82:16 119:5 148:19 187:20 188:5,7 219:5 234:17 248:8 263:7 264:15 269:14,16 273:1 304:20 comes 185:16 233:18 comfortable 102:14 130:22
---	---	---	---

[coming - confirmed]

Page 12

coming 159:6 187:21 233:17 237:2,10 264:8 comments 306:5 commissioner 2:18 4:7 5:2 310:5 common 303:11 commonly 19:16 288:9 communicate 223:16 communication 65:20 72:9 companies 109:19 comparative 200:13 compare 101:3 101:23 103:12 107:19,21,22 108:7 117:23 118:1 157:12 163:22 164:9 164:23 165:1,2 165:18 169:21 170:11,13,15 190:5 226:23 227:11,20 228:7 229:6,8 240:23 241:19 241:20 242:17 242:19 243:19	277:7,9,14 283:22 292:22 compared 78:7 101:5 104:9,19 107:7 166:22 255:9 277:6 compares 106:6 comparing 96:10 98:22 106:1 151:13 165:23 232:17 277:16 281:2 comparison 61:21 77:18 103:15 148:23 166:18 190:23 229:23 255:7 compartment... 70:15 competitors 295:14 compiled 48:8 70:13 complaint 290:13 complete 37:7 121:2,3 129:23 277:9 313:8 completed 311:16 completely 93:18 114:14 121:1	complex 127:17 290:23 compliance 2:5 complicated 13:7,8 125:10 component 118:15 composite 199:20 compromised 257:16 computer 8:16 9:8 19:17 26:6 31:23 32:1,14 33:7,12,20 34:23 35:9,18 60:9 64:11 188:6 229:1 234:12 239:3 241:21 242:2 242:10,20 248:8,23 289:9 310:9 computers 235:3 241:9 concave 181:19 concept 13:9 94:18 117:5 concepts 116:14 concern 105:11 306:12 concerned 83:17	concerns 112:20 127:12 128:20 130:23 282:7 284:20 286:1 conclude 255:21 concludes 309:12 conclusion 219:10 269:14 269:16 conclusions 115:5 concretely 95:22 condition 85:6 173:15 conditions 173:16 conduct 207:8 conference 34:3 confidence 18:22 27:5 confident 11:10 36:3 42:12 configuration 170:19 222:22 225:7 confirm 15:15 16:7 85:19 134:10 259:17 confirmed 275:7
--	--	---	--

[confirms - corresponds]

Page 13

confirms 216:11	56:11,12 60:17 64:7,8 77:6	contracted 63:11	78:9 80:11 86:1 88:15
confused 102:22 184:13	86:19 136:4 162:18 208:5	convenient 34:4	89:18,23 91:16 91:20 98:17
confusing 102:3 120:20 170:7 283:4 285:8	232:8 constraints 110:17 285:23	conversation 29:3 121:4 162:13 280:21 291:5	99:9,17,21,21 100:2 103:16 106:15 113:8 134:23 149:20 162:20 163:5 171:15,16,16 176:22 178:13 179:4,12 181:9 183:9 189:1 190:6 195:8 196:7,21 200:4 212:20 214:9 215:7 219:19 221:9 222:3 229:16 230:18 234:6 235:19 239:6 240:5,18 253:18 271:6 277:18 301:10 310:12 313:8
confusion 40:2	242:8,9 253:2	convert 36:10 75:2	corrected 67:5 67:6
connected 20:22	contact 92:15 147:19 152:1,4 152:5 179:22 182:7 202:16 203:17,18 231:3,11,14 232:2,4,11,12 233:23 238:12 261:14,14 284:10	converted 35:6 convex 181:4 181:20 182:10	correcting 306:17
connection 146:17 191:17	constructioni... 242:8,9 253:2	convinced 273:21	corrections 313:6
consequential 300:21	contacted 201:12 286:2	cooperate 234:12	correctly 38:3
conservative 88:5 136:3 171:23 192:17	contain 74:3 239:17	copies 38:16 46:20 311:14	correlates 68:9
conservatively 164:16	contained 62:21 81:11 240:4 267:16 268:6,7,7	copy 9:12 22:21,23 28:9 28:10,12,13,19 32:14 33:21 35:15,16,19,23 48:5 74:9	corresponds 257:4,8
consider 90:14 90:18 119:2 299:19 307:20	contemporan... 25:15	correct 12:10 13:18 15:1 21:7 29:17 36:10 37:2,14 40:16 42:3,21 43:2 49:9 52:13 54:14 57:20 58:10,16 62:4 65:14 77:7,19,20	
considerably 197:13	content 310:8		
consideration 304:20,22	context 100:15 111:4 194:17		
considered 105:9 119:4 123:16 304:18	continued 304:11		
consistency 55:1			
consistent 12:23 14:6,20 44:12 55:21,21			

[corrupt - crash]

Page 14

corrupt 44:7	covered 151:21	123:18 124:1	205:21 206:5,8
corrupted 9:15	248:1	124:10 126:17	211:9,16 212:2
9:16,23 10:4,5	covering	126:18,19,21	218:1 221:16
14:8 18:17	187:23	128:13 130:11	223:11 224:8
corruption	crafted 16:2	131:16 133:8	224:10,11
8:15	crash 71:12,13	133:16 134:2	236:15 237:15
counsel 2:10,12	71:15,16,22	138:21 139:12	237:20 238:1
5:5,15 310:15	77:5,5,12	139:19 140:14	243:7 245:5,21
311:14	78:22,23 80:14	140:16 141:15	246:7 247:9,11
counterpart	82:22 91:3	142:11 143:5	248:3 252:2,7
44:16	92:18,20 93:13	144:12,17	254:3 256:20
country 1:10	94:1,1,23 95:5	145:5,8,18	257:22 258:7,9
5:19 97:13,17	95:13,21 96:3	146:22 147:17	258:15,21
97:19,22 301:2	96:6,15,16,18	149:17 150:2,7	259:12,18
303:17 304:15	97:8,11,14,20	150:13 151:13	261:17,21
311:4 312:1	98:5,23 99:5	153:15 154:3	262:1,3,4,7
313:1	99:12,19 100:1	154:17 155:1,2	263:4,8 264:3
county 310:3	100:3,6,16	155:11,19	264:4,9,16,17
couple 12:15	101:4,6,7,8,15	156:2,5,14,15	265:7,10
19:13 20:1,7,8	101:18,21,22	156:20 157:15	266:11 269:20
39:14 48:15,19	102:18 103:5	157:15,20	270:6 272:2
306:8,11,13	103:12,19	158:8,14	273:15,23
308:17	104:2,5,11	161:13 163:8	274:1,12,17
course 200:17	105:6,11,13,21	163:23 164:10	275:3 276:5,22
209:12 221:10	106:4,14,19	165:23 166:13	277:6,7,10
228:13 259:22	107:6,7,13	166:15 170:18	280:9,18 281:2
265:15	108:1,3,7,11,15	170:20 171:2,9	283:9,22 284:8
court 1:1,22	108:17,23	176:19,21	285:4 288:13
2:6 4:1 5:1 6:1	109:23 113:6,6	177:17 179:8	288:13 291:17
138:18 139:10	113:14,15,20	180:7,9 184:1	293:8,13 294:6
140:4 143:15	114:9,10,14,21	185:2,18 186:8	294:7,11,13
287:5,15 310:4	115:21 116:2,9	186:14,16	301:21,23
cover 205:19	117:2,23 118:2	189:4 196:1	302:6,9,11,21
256:20 258:6,8	118:5,12,13,23	200:3,21 201:3	303:3,5,10
258:15	119:9 122:8,9	203:23 205:14	305:2

[crashed - data]

Page 15

crashed 84:16 161:8 crashes 122:4 139:19 200:13 202:1 252:11 302:20 304:16 crashing 165:13 crazy 279:20 create 40:13 50:5 70:8 73:4 106:19 141:15 142:11 143:7 240:15 271:11 297:3 created 36:21 57:12 240:17 298:4 creates 72:22 creating 297:6 crew 63:4,9,12 63:13 64:17 65:10 75:1,2 75:19,23 76:5 76:11,12,16,17 76:19 critical 93:1 114:8,8 147:20 171:8 299:20 criticism 102:17 163:8 criticisms 105:21 criticizing 107:6 126:4	crosby 146:20 159:1 207:22 215:10 216:11 216:12,21 217:9 218:15 219:21 220:9 223:6 232:9 245:19,22 crosby's 98:15 160:19 220:18 222:18,20 225:15 244:7,8 247:7 crush 13:15 14:5,14 16:5 16:16,18 62:14 63:15,16,22 64:9,16 69:8 70:12 71:5 72:14 73:5 76:13,14,14,15 88:4 90:16,20 90:22 91:20 92:2,19,21 93:3,12 96:1,3 96:6,14,20,21 97:1 100:11 107:3,5 109:13 111:1 112:8,11 112:14 122:18 130:5 138:19 139:11 140:11 140:13 147:11 147:13,16,21 147:22 148:3,9	155:17 158:12 163:12,17 164:14 167:12 167:17 168:1 168:12,15 169:1 170:13 201:2 202:5,8 203:1,15,17 205:6 220:11 231:6,22,23 232:18,22 262:6 265:9 268:19 274:8 274:22 275:1,9 275:11,11,12 275:17,20 276:2,11,17,21 277:2 278:15 281:4,7,17,19 282:11,12,16 284:3,18 285:18 288:15 289:5,7,16 291:1 292:10 301:11,17,21 crushed 200:10 237:3 crushes 96:10 148:13 crushing 150:21 crux 15:21 cry 88:23 cs 311:15	curious 44:23 current 53:17 53:22 54:4,5 54:17,22 55:2 56:1,18 59:22 cursive 184:20 185:1,4,5 curve 196:16 curves 197:15 197:16 cv 1:5
d			
d 3:1 183:12,21 184:8,8 185:6 185:8 187:7,8 191:2,7,10 196:16,17 197:4 damage 167:11 197:17 256:10 256:12 267:6 dancing 233:18 dash 206:15 data 10:2,14,18 11:1,16 12:11 12:21 14:5 16:5 19:3,10 21:6 28:7 31:2 38:1,6,9,19 39:1,16,22 40:5,12,15,16 40:17,20 41:8 41:10,11,14 42:17 43:6 48:11 49:2,4			

[data - depicted]

Page 16

50:4,10,18	54:10 310:13	deemed 313:6	deleted 298:19
51:6,17,19	312:24 313:12	default 62:1	delineate 246:6
52:1 56:14	dated 7:2 47:23	65:7 78:1	delta 39:6,18
57:20,20 60:22	dates 6:18	91:16 173:7,16	110:15,23
62:12 64:12,13	58:17 59:14	174:10	112:13 113:4
67:13,18 68:1	day 11:21 18:3	defaults 63:20	170:13 229:11
68:3,5,8,17,20	33:10,22 34:5	65:1,2	285:22 288:18
69:3 70:21	48:1 55:22	defendant 1:11	demonstrate
72:3,7,20 76:4	119:16 238:5	4:13 5:19	93:6 106:22
76:12 87:2,17	269:10 292:1	defendant's 7:6	139:1 166:14
110:13 112:7	313:15	178:8 186:9	166:15 241:15
113:4,8,12,19	days 20:16 23:8	251:10	242:14 261:7
114:17 116:11	311:16	defense 44:16	265:13 288:12
142:2,3,17	de 4:15,19	72:1 77:5	demonstrated
146:21,22	deal 131:18	92:18 99:1	93:2 114:20
166:23 169:3	197:11	142:11,15,20	demonstrates
169:21 199:18	dealing 130:1	defer 294:7	208:7
199:18 239:23	decatur 4:16,20	define 93:16,18	dent 252:15,18
240:6 245:19	decent 271:11	147:13 306:8	257:3,7
245:21 246:11	decide 136:7	definitely	denying 127:1
246:15,20	267:7,22	179:21 236:21	127:3
265:7 297:20	286:22	definition	depend 207:15
297:21 298:9	decided 130:3	93:20,21,23	219:13
298:13 301:21	224:21 263:8	94:10,13,15	dependent
302:3	268:11	deflected 259:1	179:9 193:8
database 62:4	decimal 38:21	deflection	195:7 219:10
62:6 74:22	decision 60:15	153:23 154:2,7	225:22
89:22 90:2,3	deck 258:9	155:2,3,7	depending
date 5:3,11	declare 313:4	deformation	33:22 162:8
20:19 25:23	decrease 93:12	155:22	269:9
44:15,21 45:1	169:1	degree 301:6	depends 33:10
45:14,14 46:2	decreased	degrees 232:9	34:4 178:19
46:6,11,13,16	281:18 282:16	delete 298:3	231:21 237:22
46:17,18,19	decreasing	299:1	depicted 72:15
47:2,4,12	282:9		

[depiction - different]

Page 17

depiction 13:15 69:13 depictions 73:5 depo 8:1 11:14 12:5 13:3 55:3 86:10,14 87:14 87:23 88:2 96:21 128:7 168:21 216:3 226:6 242:18 244:8,8 249:11 249:14,22 250:4,13 257:3 261:6 262:13 267:19 268:18 268:22 273:19 deponent 311:13 313:3 deposing 311:13 deposition 1:17 2:3,4,14,17 3:11 5:13 7:5 10:11 11:4 12:3,9,13 13:1 14:2,21,23 15:9,17 16:7 17:11,22 18:16 18:20 20:10,12 20:21 21:5,6 21:12,20,23 23:14 24:22 25:3 27:1,18 27:22 29:15 36:23 37:5	39:19 41:12,14 42:17 44:13,16 44:21 45:1,6 49:3 50:9,11 51:2,3,15,16 52:2,6,7 55:5 58:2,4 60:11 64:7,23 83:22 84:2 86:19 88:12 98:15 111:5 115:1 122:1 136:4 142:5 146:19 160:19 161:6 161:23 167:8 216:10 220:16 228:21 232:14 232:17,20 239:6 240:18 245:18,19 262:23 266:7 266:14 269:13 275:7 290:19 291:7 303:18 305:15,18,23 309:12,19 depositions 2:7 deprived 156:6 depth 216:20 232:18,21,22 275:10 308:22 derived 301:22 describe 75:3 104:13 158:13	described 44:1 112:4 115:23 160:20 206:3 267:22 describes 159:1 224:4 description 162:10 design 133:1 274:17 301:5 designed 109:23 112:14 172:5 286:11 289:23 302:20 305:3 detail 39:8 51:5 detect 17:10 determination 96:23 148:4 272:12 281:11 determine 47:1 91:19 109:10 125:15 131:18 155:1 171:21 176:19 178:15 189:3 202:9,16 215:4 244:11 246:7,13 258:8 259:4 261:2 262:6 263:3 272:5,17 273:14 274:23 275:11 281:7 determined 78:16 87:19	108:20 128:14 197:22 266:8 266:10 267:5 determines 267:12 determining 62:18 90:15 develop 275:11 developed 296:10 device 160:8 devin 4:18 5:21 diagram 221:13,23 diagrams 222:2 dial 4:11 diameter 52:11 67:2 dictates 203:15 difference 14:12 16:12 67:1 103:23 104:3,12 105:5 120:5 168:1 173:2 191:1 202:2 276:2,11 276:20,21 differences 14:17 93:13 103:19 105:6 105:10 115:5 299:14 301:1 different 18:18 20:23 22:6 27:13 37:11,14
---	--	---	---

60:20 62:11 63:7,8 73:7 78:1 92:21 94:1,19,19 99:3 106:1 109:1 114:14 126:21 129:19 130:6 150:2,3 150:7,9 168:17 175:13,15 181:16 185:21 193:23 196:22 196:23 197:15 200:22 201:2,5 206:13 210:13 215:6 221:5 236:12 265:23 273:1 280:13 281:1 287:1 289:17 291:14 291:18 294:6 297:1 298:9,12 308:20 differentiate 89:16 90:9 differentiation 100:6 281:4 difficulties 138:4 182:19 digital 29:16,20 29:22 33:13 direct 137:16 166:18 direction 212:1 216:1	directly 36:14 36:17 208:3 230:9 disadvantage 64:3 101:13 disadvantaged 122:18 208:1 disadvantaging 164:1,5 disagree 45:22 84:9 113:9 125:18 144:3 234:1 disc 8:16 disclosed 296:19 discover 12:6 12:10 19:9 22:16 40:8 discovered 58:7 discoveries 20:23 22:7 discrepancies 308:12 discrepancy 52:12 168:11 306:9 discuss 61:21 116:14 226:5 discussed 12:13 37:23 84:2 94:9 105:8 discusses 94:2	discussion 299:7 discussions 287:13,16 displaced 259:14 displacement 259:18 display 73:15 239:3 displayed 235:1 dispute 59:3,5 87:11 98:20 160:23 163:1 disregarded 49:4 distance 178:15 178:18 179:1 191:3,10,20 197:23 198:3,6 213:15 214:2,9 218:10 228:18 236:6 239:17 241:8,10 260:23 262:5 263:2 264:11 264:14 265:8 271:20 281:8 distances 179:7 191:13 district 1:1,2 4:1,2 division 1:3 4:3	document 26:12 29:7,8,9 159:2 215:15 228:3 249:4 251:7 297:2 298:2,5,6 documented 98:6,7 217:4,6 230:8 documents 26:19 27:21 38:14 74:2 doing 19:18 26:7 34:18 47:17 102:14 108:6 112:20 130:22 133:13 133:13 139:20 145:4 164:10 176:7 185:13 194:16 210:7 214:14,17 216:5,16 217:23 234:11 237:19 243:2 243:21 244:16 270:19 282:6 287:7 288:14 302:8 303:10 door 76:11 dotted 209:21 209:22 214:17 dozen 250:8 draw 133:1 242:8
--	--	---	--

drawing 86:17 223:15,15 225:3 231:8 241:4,5 243:21 287:3 drawings 149:7 149:8,9,10 220:3 244:1,3 266:16,18 draws 222:22 drew 221:10 driver 79:3,13 153:21 164:17 168:6 driver's 79:14 95:16 drop 34:14 dropped 168:9 252:2 dropping 135:14 due 116:19 155:16 212:9 duly 6:5 duty 76:16,17 76:18 dynamic 302:16 dynamics 36:18 90:1	ea 9:4 earlier 22:20 35:14 51:10 86:20 87:21 262:23 264:7 282:7 289:3 earliest 201:11 early 10:23 ears 127:23 easiest 159:9 184:4,6 243:17 261:7,8 easily 159:13 262:18 easy 20:5 121:16 226:22 269:19 edge 159:23 184:8 185:14 185:15,17 186:18 188:21 188:22 189:8 189:20 190:3,9 190:10,16,21 191:2,10,17,20 192:5,8,9,14,14 192:22,23 193:9,9,15 194:9 195:3,4 197:7,23 198:1 198:3,16 204:22 205:18 212:6,12,18,19 213:20 214:1 219:11,12	edges 181:8 182:6 238:19 edit 35:16,17 editing 297:2,7 298:2,5 effect 2:4 106:20 122:17 167:6 effort 24:2 116:20 117:1 127:14 174:19 191:19 230:9 275:19 276:10 efforts 43:19 either 34:9 36:7 77:22 79:16 99:19,23 148:22 151:1 156:10 180:18 269:2 308:19 electronic 22:21,23 28:15 38:16 74:9,15 elevation 275:4 elevations 173:3 210:13 eleven 86:8,10 86:14,23 87:13 87:16,20,23 231:18 255:18 265:18 266:1,4 266:11 268:14 269:13 271:1 273:10,11,12 273:20,21	elite 251:13 embedded 239:2,12 241:2 emblem 86:11 184:11 185:15 187:16,20 200:7 232:3 empty 81:1 ended 194:14 309:19 endpoint 200:22 endpoints 178:19 energy 110:3 153:2 engage 152:17 152:20 engaged 147:23 152:18,21 engagement 95:20 123:3 199:1,2 202:16 230:5 231:3 232:7 238:11 253:9 289:5,7 engaging 110:20 153:9 274:3,6 engineer 112:19 119:2 120:1,6,11 121:13 136:12 184:18,18 286:18,23
e			
e 3:1 69:15,16 196:6 312:3,3 312:3			

[engineering - exact]

Page 20

engineering 9:3 9:5 36:18 43:16,22 56:16 90:1 102:5 116:12,19 117:1 120:22 129:23 130:18 136:11 233:10 233:21 engineers 106:23 enter 11:16 entire 95:13 114:8 224:15 224:18 entirely 298:4 entirety 95:21 environment 17:18 291:4 equal 100:13 equals 78:21 equate 297:23 equation 164:11 170:22 errata 311:11 311:13,16 erroneous 220:2,18 222:7 225:20 error 24:3 65:20 218:22 220:20 errs 268:18 escape 71:5 72:14 77:16	78:6 82:19 83:1,10,13 84:10,16 87:8 89:15,17,21 90:9,10 91:11 91:19 92:7,11 92:14,16,20 95:11 99:9,14 99:20 100:12 101:13 122:14 122:18,23 147:12 149:22 150:17,18,21 152:5,10,19 155:23 156:13 157:9,15,15 160:10 161:8,9 164:5 175:14 179:2,8,8,15 180:20 181:15 183:8,19 184:1 185:2 186:14 186:14,16 187:16,19,20 188:23 189:4 190:11 191:22 193:12 198:8 199:3 200:3,7 200:23 201:5 203:4,23 204:2 204:23 206:21 206:23 207:1 207:11,17 208:22 209:3 209:14,15,16	209:17 210:19 212:11 213:17 214:10 220:8 223:23 224:3 226:1 228:10 228:11,13,17 230:6 234:5,6 235:18,23 236:16,17 254:20 255:16 255:23 256:20 258:7,22 259:1 260:9 270:14 270:16,16 274:4,6 escape's 64:2 153:1,3 especially 64:8 esquire 4:10,14 4:18 essentially 63:5 237:6 est 309:19 establish 92:6 106:5 126:15 158:4,10 161:9 161:20 165:15 166:4,9,11 180:23 193:7 205:20 245:1 established 68:8 110:9 137:19 161:12 165:12 204:13	estimate 214:12,21 219:6 estimating 216:8 estimation 82:6 82:13 et 1:7 evaluate 280:11 evaluation 225:23 events 109:21 eventually 19:23 203:7 everybody 32:18 149:1 269:19 evidence 2:15 81:4 95:22 97:5,6,9 139:10 204:3 233:8 236:15 260:22 262:4 294:11 exact 20:2,18 46:18 80:21 93:23 94:15 121:12 128:11 129:18 167:3 182:2 236:11 272:18 276:13 277:16 278:1 287:13 304:21 307:15 308:2
---	--	---	---

[exactly - f]

Page 21

exactly 16:10 28:5 35:23 52:3 60:4 70:6 75:21 82:10 86:16 88:2 109:9 127:19 139:20 158:3 160:14 162:4 199:6,9 208:18 224:16 237:19 254:9 256:4 265:23 280:5 286:6,11 294:14 305:9 305:22 examination 3:3 5:8 6:8 42:8 296:5 304:11 examined 154:23 example 3:17 123:11,15 130:23 131:4 134:14 140:2 298:4 examples 134:21 139:22 282:7 except 2:11 127:20 148:9 200:18 211:23 excessive 104:4 exclude 301:15	excuse 118:12 121:9 184:21 219:21 222:19 231:16 exemplar 77:3 exhibit 3:13,14 3:15,16,17 7:4 7:6 178:1,8 186:7,9 251:9 251:10 270:5 303:18,21 304:2 exhibits 3:11 177:22 exist 8:4,5 13:12 19:6 existed 18:13 19:12 24:20 107:13 157:14 exists 231:11 238:10 expect 41:9 202:19 246:4 303:13 expected 40:14 158:23 expenses 303:9 experience 112:17 145:17 256:3 287:21 307:7 expert 50:4 142:11 158:10 expertise 145:11 158:2,5	experts 202:8 308:17 expires 310:23 explain 10:16 31:7 66:14 125:23 126:8 134:21 141:13 161:10 193:14 206:12 279:5 296:23 explained 124:6 127:11 129:21 133:22 229:14 251:1 280:18 explanation 189:16 exponent 94:23 95:5 98:17 101:18 103:20 142:11 144:18 223:5 224:8 280:18 exponent's 101:8 expose 241:13 exposing 239:15 241:17 242:4,15 extended 20:4 38:21 63:4 extent 65:9 203:1 extra 301:13	extrapolated 212:8 extremes 162:1 eye 308:16 eyeballed 272:20 273:4 f f 39:6 62:1 63:3 63:23 65:8 66:14,16 67:9 74:21 76:23 77:5,12,23 78:6,19 79:4 80:13,17 85:12 88:3,9,13 95:16,17 99:4 104:18 151:22 152:6,9,18,23 153:2,4 160:11 161:14 162:19 178:7 179:14 179:15 181:17 193:20,21 206:18,20 208:11,16 209:17,18 212:17 213:23 214:8 215:5 221:9 223:23 224:2,5,16 229:22 237:10 255:15 270:18 273:6 299:9 300:2
---	---	--	---

[facilitate - find]

Page 22

facilitate 216:22	farther 180:2	28:13,15,18	299:5
fact 67:5 87:12	fashion 19:2	29:23 31:3,4,4	filed 26:10
150:1,14,17	37:5	32:18 33:3,12	filer 10:21
203:9 215:15	faster 195:16	35:7 36:7,10	files 8:22 15:13
220:17 222:11	favor 103:3	36:21 37:6,7	17:13,17,19,23
222:11 288:3	268:18	37:12 41:13,15	19:4,10 20:20
301:4	favorable	42:17 43:6,17	20:21 21:4,11
factor 90:23	93:10 301:9	44:6,6 47:7	21:21 22:1,10
93:1 209:9	february 58:5	53:18 60:13,15	23:11 29:16,20
factoring 80:8	58:22 59:7	66:18 67:13	29:22 30:4,8
factors 197:21	federal 5:4	72:10 74:8,8,9	30:12,16,22
fail 309:1	302:16	117:6 146:20	32:11 37:11,14
fails 311:18	feel 49:11 140:9	146:21 147:5	38:13,14 42:15
fair 49:6,11,15	232:22 287:3	170:22 190:18	42:19 43:23
49:19,21 128:8	feeling 20:16	198:10,11,12	52:2 69:11,11
141:6 162:10	feet 201:16	198:13,14,17	74:4,15 182:19
163:22 170:3	203:12 207:4,6	199:20,20,22	226:10 234:15
176:22 177:19	208:14 232:23	220:15 222:21	249:1 296:22
falls 84:19	felt 104:6	226:12,13	298:19 299:1
false 215:8,9,16	figure 39:14	227:15,16,20	filing 2:17 18:6
223:1 225:7	166:8 177:17	228:21 230:7	23:22 24:3
family 5:22	178:3,11,22	230:10,22	27:6 29:7
far 38:15 39:8	179:6 196:3	232:14 238:20	final 9:6 24:18
43:11 68:4	200:2 206:2	239:2,7,10	26:17 42:7
91:8 93:11	259:22	240:4,7,8,13	45:17,19
115:5 122:14	figured 54:21	241:2,17,19,20	274:12 298:22
123:4 150:10	file 7:20 8:2,4	241:22 242:1	finalized 45:15
159:13 177:4	9:3 12:17 13:6	243:19,20	finally 12:19
188:21 189:20	13:10 17:18,18	244:6,7,8	20:19
214:20 230:6	17:18 18:8,12	245:8,9,13,13	find 8:7,20 13:6
273:3 276:16	18:21,23 19:16	245:23 246:16	17:21 18:21
290:17 299:21	21:17 22:8	249:7 250:2,9	19:7 20:20
307:6	23:17,23 24:10	250:15 263:16	22:7,22 29:23
	25:6,19,20	267:9 268:15	29:23 43:5
	27:7 28:12,13	298:22,23	44:6 46:3

[find - form]

Page 23

52:21 76:10 168:20 169:8 169:10,11 181:11 182:14 184:4 212:23 216:23 223:2 245:15 248:7 254:15 260:11 261:8 265:4 290:2 fine 14:16 84:3 88:6 125:20 138:7 142:9,18 144:4 146:3 193:4 269:3 283:18 287:17 finish 154:17 229:4 244:13 246:10 finished 25:5 293:20 306:2 finishing 47:19 first 6:5 7:17 12:13 14:1 15:4 37:5 39:21 44:14 65:6 75:8 78:19,20 84:2 86:10 104:1 106:8 114:20 121:5 142:1 147:11 165:16 170:7,12 171:9 177:13 179:14 179:21 180:19	182:7 197:9 202:16 214:23 222:9 224:22 227:16 228:9 231:3,11 232:2 232:4,11 233:23 261:13 261:14 266:6 305:18,22 fit 197:16 198:23 199:1 five 88:19 89:4 151:21 164:6 195:14 199:9,9 199:19 208:8 217:14,20 221:14 222:21 223:14 225:4 225:20 231:13 231:18 276:3 287:11 fix 43:9,15 298:18 fixed 27:1 195:15 fixing 184:23 flat 181:3 flip 225:3 flipped 211:23 floor 155:4,17 155:22 259:7 fluid 81:6,16,18 299:8,21,23 300:2 307:4	fluids 80:13 81:11,15 flush 153:1,6,6 153:11 fly 129:11 fmvss 302:16 fold 38:10 folder 8:20 199:11 227:17 227:18 249:13 249:15,18 folders 9:4,5 follow 64:14 113:20 202:18 254:11 282:20 282:22 283:7 284:19 289:8 304:8 followed 52:6,9 65:23,23 66:6 125:14 following 5:9 209:20 follows 6:6 246:16 foot 86:9,14,17 86:18,23 87:3 87:23 88:1 201:17 252:4 256:8 266:17 266:20,20 force 2:4 151:14 203:16 forces 93:11	ford 71:4 82:19 83:10 86:11 176:20 178:6 179:13 182:1 183:13,19 184:3,11 186:19 187:5 188:21 189:23 191:2,18 194:18 196:7 196:14 198:15 199:3,4 200:6 228:9,16,17 229:5,7 230:6 232:3,17 234:4 235:22 236:16 236:17 270:17 270:18,20 272:6,17 foregoing 5:5 310:7,10 313:5 foremost 115:7 forensic 42:8 forgive 180:3 204:5 form 2:11 18:12 19:1 21:9 33:13,21 49:7 70:20 102:2 111:18 113:21 116:3 117:16 126:5 140:17 141:8 151:8 219:15 224:19 225:13
--	--	--	--

[form - georgia]

Page 24

236:2 238:2 279:7 280:14 280:16 283:3 285:7 305:19 310:9 formally 267:18 format 36:7 formed 269:6 formula 281:19 282:12 formulas 275:15 formulate 296:9 forth 113:5 forties 102:21 fortunate 220:4 forward 155:11 203:12 228:12 foul 69:22 found 9:17,19 10:8 23:2 106:14 130:7 138:18 140:4 186:2 228:1 foundation 105:1 four 76:11 151:12 178:11 199:8 218:22 221:13,14 222:14 223:13 223:19 257:5,6 260:4	fr26 7:8,13 25:8 28:14 41:5 46:3 51:9 51:14,20 61:19 142:7 214:5 frame 95:10,19 107:2 110:1,2 122:13,21,22 131:1,23 147:20,23 148:10 149:23 152:4,5,19 153:10 172:22 220:23 255:8,9 255:11 274:5 285:12,12 frames 94:6 206:5 free 261:18 freezing 234:14 front 6:16 159:6,23 180:2 199:4 202:6 212:5 223:22 224:2 228:5,10 228:16 229:22 236:19 237:8 240:20,23 249:2 252:17 252:21 froze 195:10 frustration 137:14 295:11 fuel 80:17 81:1 83:13	full 2:5 81:1 88:18 104:15 104:17 146:23 152:2 162:3,6 164:6 fully 40:7 166:4 224:12 function 156:4 functioned 156:18 functioning 60:14 functions 243:19 further 2:1,8 2:16 150:20 180:10 309:9 310:14 furthest 184:10 252:16 future 145:4 295:8	gbb 249:11,13 250:3 general 9:23 142:18 191:9 283:6 generally 79:20 213:9 284:19 288:10 289:8,9 289:13 292:14 292:16 309:3 generate 21:21 38:14 46:16 74:16 generated 14:11 17:23 35:6 72:18,19 74:4 110:4 generates 239:13 generating 142:6 147:1 generic 283:7,8 generically 70:22 103:17 gentleman 31:1 geometrically 262:15 geometries 110:19 geometry 75:22 75:23 267:11 george 5:14 georgia 1:2 4:2 4:12,16,20
		g	
		g 1:17 5:7 6:4 311:5 312:2,24 313:2,4,12 gainesville 1:3 4:3 gamut 205:19 gap 156:20 157:4,6 garbled 48:20 gas 80:17 104:15,17 299:19	

[getting - going]

Page 25

getting 13:6 23:21 25:3 26:7 109:9 123:3 143:12 152:12 154:12 163:11 176:5 206:1 279:20 286:2 297:15 306:20 give 20:15 26:18 42:11 43:3 56:20 83:20 132:12 134:13,13 136:5 158:11 158:18 164:22 165:3 187:10 192:2 194:16 195:13 230:20 234:15 245:4 247:8 248:2 254:16 263:18 267:19 269:17 282:7 304:14 given 42:12 43:21 110:18 110:19 112:8 112:12 133:21 134:4,20 140:2 248:15 283:15 296:14 313:9 gives 12:3,4 161:15,15 168:21 199:9 214:3,19 225:3	229:10 238:22 255:18 256:15 giving 47:9 121:12 207:21 214:12 glad 137:20 gladly 26:23 glass 84:11,15 84:17,19,20,23 84:23 85:4 299:10,21 glitchy 229:1 go 9:12 13:5 17:14 28:16 29:11 31:12,12 34:2,13 35:4 36:16 48:8 56:7 68:4 87:16 90:21 102:6 107:17 108:2 111:21 112:3 114:3 115:9 116:6 117:18 120:7 120:19 124:17 127:7 129:3 130:10,12,12 130:13 131:21 132:14 136:1 140:21 144:22 149:9 158:17 161:21 171:2 181:14 182:20 185:12 186:6 186:12,22	187:22 188:12 195:15 218:2 220:11 221:21 221:22,23 222:13,19 225:17 228:23 229:3 234:23 237:8 240:20 244:16 245:22 251:6,20 252:19 253:15 253:19,22 254:16,17 255:4 257:1 260:5,6,11 279:9 281:13 283:5,10 285:9 286:13,15 290:1 291:8,13 292:3,8,17 298:2 302:5,5 305:8 306:1 308:23 309:1 goes 28:10 32:13 91:8 94:17 103:9 116:4 117:16 138:4 140:18 148:5 159:12 206:22 281:19 298:16 going 6:10 12:23 13:2 20:5 34:7,15 35:5 39:15	40:21 50:19,20 56:8 61:2 63:6 64:12 65:3 73:14,15,15 74:19 83:23 86:18 100:11 103:11 108:10 109:3,7,7 119:16 121:9 125:2 131:11 132:22 133:1 135:13 140:9 141:12,12 142:22 143:9 144:23 147:17 150:10 163:13 164:23 165:1 167:14 168:8 168:19 171:2,5 181:7 186:22 195:22 201:2 202:5,6,12,15 202:17,18,23 207:2 212:10 212:11 213:18 217:1,2 218:18 227:7,8,9 233:21 237:10 237:12 239:20 241:13 242:17 244:14 247:3,8 253:22 257:14 260:10 273:7,9 273:11 274:15 277:8 278:10
--	--	---	---

[going - he'll]

Page 26

278:18 287:11 292:8,17 295:13 302:9 303:16 308:15 gold 194:15 good 16:22 17:9 57:1 61:7 86:6,20 123:3 123:15 128:8 129:5,13 132:1 132:3 133:2 146:2 147:9 159:4 160:4 162:12 164:18 213:10 228:14 238:9 253:1 254:22 263:10 267:20 278:6 286:2,3 290:12 gotcha 75:16 205:10 254:21 government 302:22 303:2,8 graphical 13:14 14:4 16:4 69:7 72:13 73:4 great 30:5 61:18 68:19 128:20 146:1,8 196:5 203:1 287:14 309:4 greater 149:18 150:13 151:14 308:23	green 192:21 193:8 206:15 206:17 209:22 210:18,23 211:4 grief 235:5 grimes 67:23 82:17 96:7 113:11 114:15 114:23 115:4 144:1 146:20 148:21 154:13 160:17 161:7 161:11 177:1 198:6,7 202:10 203:9 216:9 217:15 219:21 220:9 230:17 232:10,12 237:4,13 238:13 240:9 243:15 245:4 245:18,22 246:3 256:3 259:9 260:23 262:5 263:1 266:21 275:6 277:6 290:7 292:7 294:18 308:19 grimes's 44:15 45:8 91:2 96:12 114:16 118:8 141:15 146:21 147:5	161:6 177:1 190:17 220:11 222:15,17 225:1 226:2,3 226:4,4 227:13 239:7,10,16,23 240:4,7,13 243:5 244:3,7 244:8 245:23 246:11 247:7 247:20 264:6 ground 159:10 208:11 grounds 2:13 groundwork 292:4 guess 34:6 73:9 188:10 193:11 226:3 guesses 11:12 guessing 44:17 gunn 4:11 guy 10:21,21 h h 312:3 habit 56:16 hair 300:3 half 135:1 214:4 254:4 257:5,6 hall 175:23 hand 26:11 64:10 130:5 188:1 289:15 291:23	hands 295:16 hanging 258:6 happen 9:7 109:22 233:19 237:15 302:19 happened 8:8 23:6 24:4 25:21 26:15,21 28:4,4 43:4 55:17 122:20 139:5 223:18 235:2 286:4 happens 8:12 19:15 27:7 139:18 199:18 203:1 228:14 235:3 298:10 happy 56:7 138:10,14 258:14 295:17 hard 33:21 43:7 227:11 266:17 harder 13:7 harm 69:22 hash 228:11 hatch 91:19 155:23 156:13 156:20 157:4,6 157:9 175:16 259:1,8 hate 175:22 195:12 he'll 34:17 166:17
--	--	--	--

[head - hook]

Page 27

head 46:2 105:16 111:7 119:7 208:13 hear 15:23 48:14,17,19 137:13 heard 15:22,22 170:4 192:8 295:10 hearing 128:2 heart 269:1 heck 26:11 height 67:4 76:23 77:12 99:4 201:7 208:10,16,20 209:4,7 238:4 284:9 285:2,5 291:18 heights 209:10 held 217:10 help 26:2 45:5 45:11 48:16 194:12 211:8 284:15 helps 211:12 hereto 313:7 hey 13:5 20:19 23:5 120:8 167:9 188:12 266:16 274:13 hiding 233:2 high 162:5 164:16	higher 63:17,22 187:22,22 209:13 210:8 210:19 212:10 289:18 highlighted 79:7 hill 3:5,7 4:10 5:18,18 6:9 61:2,7,14,15 69:16,18 70:19 71:7,14,23 72:2,11,12 83:19 84:3,8 84:10 89:3,13 89:14 105:17 105:20 106:9 114:1,7 119:17 121:7 125:21 126:4 137:2,9 137:10 138:7 141:10,11,22 143:1,8,19 144:2,10 145:2 145:9 146:1,5 146:9 151:6 154:6 158:3 176:2,5,14 182:16 183:5 185:7 188:3,9 195:12,22 211:14 225:14 240:10,17 250:23 260:3 260:10,14,20	260:21 279:16 280:3,23 287:8 287:14,21,22 295:4,20 304:4 304:7,12 309:5 hinge 208:21 210:2 211:3 212:2,6,12,18 212:20 213:4,8 213:8,14,16,21 214:1,10,15,16 214:17 215:4 216:16,17,18 217:1,3,4,21 218:6,23 219:3 219:4,6,7 hinges 208:23 209:2,5,7 214:4,20,20 218:10 historically 275:8 history 292:18 hit 64:3 92:3 93:8 94:19 107:4 110:1,6 122:23 172:21 172:23 197:10 198:8,9,10,17 200:11,14 202:23 246:22 247:11,12 251:23 252:1 252:23 254:3 255:8,9 257:23	258:1 289:7 hits 201:18 202:7 hitting 110:19 166:1 180:14 200:12 274:5 288:17 hold 27:16 61:15 69:2 146:9 195:15 211:7 217:8 220:5 228:16 269:23 276:7 hole 198:7 254:8 holes 252:7,9 hood 206:19,22 208:16 209:16 211:21 212:5,9 235:18 hook 95:17 122:12,22 131:1,15 152:17 153:7 197:9,12 198:2 198:3,7 203:10 203:11 204:23 205:4,17,22 219:19,20 220:5 247:11 247:16,21 251:23 252:1,6 252:8,14,16,18 252:21,23 253:8,10 254:3
---	--	---	--

[hook - images]

Page 28

254:18 255:11 255:14,15,22 256:19 258:1,7 261:16 hooks 180:1 256:5,5 262:13 262:21 264:22 hope 195:23 horn 122:21 255:8,9,11 hour 39:5 61:3 88:9,14,18 100:4,7 101:23 102:10,11 135:1 141:19 162:18 163:1 163:22,23 164:6,10 165:5 166:14,22 hours 130:18 278:4 287:6,15 house 132:23 133:2 houses 242:7 hudgins 4:11 huge 113:10 huh 27:11 163:4 187:18 hundred 124:18 128:7 144:9 183:16 191:14 215:19 300:19,22 306:8,11,13,15 307:11 308:15	308:16,18 309:2 hundreds 130:17 245:11 271:8 hundredth 201:22 hundredths 202:2 hurting 127:23 hv 13:14 14:7 hve 8:22 21:11 21:17,21 22:7 23:11 27:19 29:17,21,23 30:16 31:16 32:11 34:8 36:18 37:11 38:18 48:11 49:2,4 50:4,10 52:16,17 53:14 54:4,17 59:1,9 59:17,22 60:5 62:7,10,17,21 62:23 63:3,10 63:20 65:8,16 69:3,5,8 70:4 70:20,21 71:8 72:5,7,19,19,21 72:22 73:14 74:3,7 79:10 89:14 90:11,12 91:4,8 106:12 107:14 109:12 109:17,22	110:11 111:3 111:16 113:2 115:14,20 122:2 126:16 127:18 128:11 129:17 132:16 133:8,15 134:1 135:2 138:17 139:9 140:3,10 141:14 142:2,6 142:10,18 143:2,4,7,20 144:4 145:4,12 145:17 149:19 151:18 169:20 169:22 172:4,5 172:8,19 174:8 260:8 276:13 277:13 278:13 278:19,20 279:3 280:5,17 281:6,10,15 282:18 284:1 285:3 288:1,1 289:10 290:5 290:22 291:16 292:13,22 301:3,4,12,14 301:20 302:7 302:14,15 303:1,7,8 304:15 305:1 305:16 hve's 90:3	hypothetical 101:20 109:14 138:20 139:12 162:9 285:4 291:17 i idea 8:9 24:5 60:20 identical 101:15 277:16 293:9,10,11,12 identification 7:7 178:9 186:10 251:11 303:22 identified 126:21 identify 5:15 27:20 116:23 ignored 49:1 50:10 illustrate 227:2 image 3:17 70:11 73:19 185:12,13 187:4,12 207:11,14 220:21 227:16 234:9,17 240:4 240:11 248:14 254:1,15 260:7 269:18 images 14:9,11 14:12,13 194:18 239:13
--	--	--	---

[images - incorrect]

Page 29

243:6 246:21 imagine 138:23 impact 91:20 91:21 102:17 110:16,22 112:11 115:11 115:14,23 118:20 131:23 153:1,14 156:1 162:7,20 163:2 166:17 168:7 179:15 180:20 196:23 200:22 202:9,22 203:11 205:1,4 205:4,17 209:19,20 210:5,21 211:19,20 212:11 213:7,9 213:14 215:5 215:11,14,15 215:16,18,21 216:17 219:23 220:2 221:4,4 221:9 222:4,5 222:22 223:16 224:5,16 225:7 225:19,21,23 229:16,20 230:1,2,8,14,17 231:6,7,9 232:8 233:1 236:7,23 237:7 249:5,6 250:17	250:18,19 251:7,7 252:12 252:14 253:2,3 256:19 257:19 285:13,21 289:4 293:12 305:5 impacted 153:3 156:13 189:3 255:15,23 257:11 impacting 201:4 impacts 93:3,4 imperfect 218:17 important 69:23 229:9 imported 297:16 impossible 281:6,10 imprint 177:16 177:19 178:6 183:12 186:17 195:7 202:20 204:23 205:18 214:8 217:8 237:1 252:6,8 270:17 imprints 176:20 183:18 186:19 189:23 191:18,21 262:12	improper 106:5 204:4 improperly 218:16 improve 44:12 improvement 11:17 improvements 56:19 inaccurate 96:16,18 263:11 inappropriate 121:6 inaudible 81:11 inboard 192:22 inch 67:4 88:6 202:11 217:11 225:19 231:13 238:15,16 266:18 273:9 276:4 inches 11:19 52:11,12 67:1 67:3 77:2,10 85:23 86:8,14 86:23 87:7 96:2 135:3 199:2,8,19 207:3 208:8 213:19 214:11 217:14,20 218:22 220:12 220:14 225:20 226:8 228:19	229:12,20 230:13 231:15 231:18,19,19 232:4,6 236:6 237:13 238:13 238:14,22 255:18 257:5,7 261:21 262:8 263:14 265:18 266:9 267:1 268:12 271:2 273:10,11 278:2 incident 178:4 304:16 incidents 172:7 include 91:1 222:12 301:4 301:15 included 56:19 90:19 142:3 301:16 302:4 including 25:12 91:9 inclusion 223:17 incomplete 39:8 inconsequent... 300:20,23 307:4 inconsistent 23:3 24:9 incorrect 114:11
--	--	--	--

[increase - interrupting]

Page 30

increase 168:23 275:20,21 276:12,15,16 278:1 280:8 284:2,4,4 increased 132:4 277:14 282:10 increases 282:10,16 increasing 93:11 incredibly 127:17 indentures 159:15 independent 177:1 217:13 246:9,15 291:19,22 independently 199:17 287:23 indicate 174:17 176:18 178:13 178:20 179:10 221:8 245:3 266:9 indicated 100:11 168:8 indicates 235:17 indicating 188:20 196:13 208:21 240:5 251:4 253:23	254:13 271:19 indication 256:18 indicative 255:22 indicators 205:3 indiscernible 16:18 17:4 individually 17:15 industry 110:9 112:18 145:13 288:10 289:11 292:7,15,16 303:11 infinite 241:6 information 43:14 67:8 70:14 71:20 83:21 102:7 113:1 145:17 156:7 248:2 274:20 284:6 initial 15:8 19:6 20:22 38:15 61:21 88:12 238:12 252:11,14 253:2 initiated 221:20 injuries 158:8 injury 157:21 158:15	input 31:2 38:19 39:16 41:1,15 79:15 140:16 175:15 239:8 268:11 272:18 298:14 inputs 35:1 46:21 145:6,19 297:8 inputted 239:18 inputting 67:13 297:20 298:8 inquired 19:19 inside 82:11 193:9 195:3 212:6 213:16 228:10,13,17 250:15 259:23 insinuate 125:12 inspect 97:11 97:20 98:9,12 inspecting 97:14 inspection 178:4 instance 138:17 190:6 194:6 instances 128:4 139:5 150:12 instructing 279:16,19 287:8 290:8,11	instructions 31:9 instructor 290:7 instructs 291:3 intelligent 137:16 intend 137:22 158:11 245:3 260:22 304:14 305:16 intended 215:14 224:10 249:5 250:17 250:18 251:7 intending 36:5 intense 295:15 intent 25:19 28:1 64:8 69:1 91:23 92:4 96:11 224:13 299:1 interested 310:16 internet 82:16 interpret 205:1 interpretation 169:6,13 185:21 192:19 193:3 224:9 interpretations 197:15 interrupting 244:19
--	--	--	--

intrusion 140:12,14 158:12 intuitively 106:22 277:1 invalid 106:4 150:15 invalidate 150:4 294:22 invalidates 114:13 investigated 19:22 91:6 investigation 121:2,3 133:13 involve 175:12 involved 99:19 103:9 140:15 218:23 302:11 involves 177:14 involving 304:16 irrelevant 259:11 308:6 308:12 irritated 138:4 138:8 ish 8:1 issue 7:19,22 8:12 44:22 61:16 77:11 131:3,4,6 142:15 146:6 231:2 248:22 266:13 303:13	issues 56:15 115:10 item 149:5,16 151:1,12,21 152:22 158:19 160:16 items 79:3 80:8 155:13 180:1 iteration 10:23 iterations 297:1 iterative 24:15 24:15	jury 269:19 justification 172:12	81:16 221:17 243:13 261:13 261:15 274:14
		k keep 19:23 26:4 136:9 141:12 187:21 192:7 253:22 264:2 279:20 297:19 297:19 299:2 keeps 88:5 kept 12:17 13:6 13:8 54:23 257:14 key 229:9 keystroke 297:12 kidd's 178:4 kill 242:20 kin 310:15 kind 9:23 28:3 118:10 153:18 156:6 171:19 175:17 184:8 206:12 225:11 228:15 255:6 286:21 289:2 298:8 299:14 kindly 7:16 kinds 160:7 kit 285:11 kits 103:7 304:17 knew 39:2 40:22 44:17	know 7:10 8:12 8:16,17,20 9:2 10:1,21 11:2 11:13,14,15,17 11:18,20 12:11 14:15,18,18 15:21 16:18 18:4 20:1,2,6 20:14,17,18 23:9 24:2,4,7 25:18 26:8,10 27:1,2,3,23 28:1,2,4,5,8,18 28:23 29:2,13 30:4,6,9,10,12 30:23 32:10,15 32:17,22 33:1 33:2,23 34:2 34:13,15,16,19 34:20 36:1,8 36:13,15,16,18 39:17,18 40:9 40:11 41:3 42:1,9 44:7,11 44:18 45:16 46:1,10,14,17 47:3,21 52:8 52:18 53:4,5 53:12 54:6,7 54:10,16 55:13 56:23 57:2,4,5 57:14,14,15

[know - knows]

Page 32

59:2,11,11,12	137:13,16	208:17,19	288:2 289:2
59:14 60:14	139:3,16 140:5	209:1,2,4,6,15	292:14,17,21
61:4 64:2 67:4	140:6,7,8,23	210:5,11	293:3 295:8
67:6,16,17,20	142:16 144:17	211:12,23	297:15,18,19
68:2 69:22	144:19 145:11	213:9,11,15	298:1,20,23
70:5 75:9 76:1	145:17,22	214:22 215:17	299:18,21,22
80:16,20,21,23	147:6,19	216:2,6,9,10	300:1,4,11,18
81:1,9 82:9	148:10 149:2,6	217:1,3,5	300:21 301:18
83:12 84:22	153:7 154:20	218:15,18,19	302:2,3 304:18
86:8,13,13,21	155:15,23	218:23 219:4,5	304:19 306:19
87:4,15,16	156:5,12,19	219:7 220:9,9	306:21 307:6
88:17 90:18	159:7 160:4,13	222:10 225:20	307:10,11
91:15 93:11	160:14,17	225:20 227:2	308:9,9,11,21
94:8 97:17,21	161:19 162:14	230:21 233:11	308:22
98:13,14	164:17 165:8	233:16,18,22	knowing
100:16 102:8,9	167:3,6 168:6	234:18 238:7	139:22 207:13
103:1,3,5	172:15,16,17	242:5 243:12	knowledge
104:6 105:15	172:19,19	245:10 247:1	25:5 29:8 91:9
107:18,19,20	173:4,18 174:4	248:23 254:5	145:10,16
108:4,8 109:4	174:13,20,23	256:7,8,13,14	173:22 265:1
109:18,19	175:3,8,11,19	257:16 259:8	308:22
110:14,15,15	179:7,19 180:5	259:11,15	known 26:22
110:19,20,21	180:16 182:11	261:10 262:10	56:23 67:9
113:15 115:6,9	183:14,21	262:14 263:6	113:1,8 191:3
115:11 116:16	187:7,7 188:3	266:1,17,20	207:13 256:12
117:9,19 119:6	188:7,9 190:5	268:23 269:4	256:13 288:17
120:2,3,6,8,12	190:9,11 191:7	272:11 274:5,7	288:18
121:19 123:13	191:9 193:2	274:15,19	knowns 113:1
128:17,19,21	198:11 199:9	275:4,7,8	knows 27:7
129:8 130:14	200:14,19	276:18,19	82:7 145:12
130:17 131:2,8	201:7,8,13,18	277:1,2,3	198:11 239:13
132:6,10,17,20	201:19 202:14	278:20,21	241:2 290:12
133:5 134:11	203:12 205:8	282:11 283:1,6	
134:14,17,20	207:22 208:4,7	284:6,8,18	
136:3,4,5	208:10,13,15	286:16 287:20	

[1 - line]

Page 33

l	leap 283:19,19	letter 6:11,15	levels 39:11
l 311:1	leave 159:8,22	7:1,11 29:10	110:2 140:13
labeled 7:3	160:3 182:17	146:13 184:19	148:7,23
37:18 222:1	220:7 228:22	185:22,22	license 252:4
225:7	234:9	191:18,21	licenses 32:1
labels 222:4,4	leaving 153:16	192:20 223:8	lift 103:7 167:6
222:22 223:16	lectured 125:17	297:11	167:7 168:23
laid 292:4	leeway 83:20	letters 183:19	285:11 304:17
land 129:11	left 19:16 87:8	184:2 185:8,20	lifted 161:8,8
laptop 241:20	88:7 100:17	186:19 187:4	161:13 163:15
large 181:12	122:15,23	189:7,18 192:5	163:17 164:14
212:23 213:1	150:10,20	193:4,5,17	165:13,16,18
310:6	183:15 185:14	194:3,4,7	165:20 166:13
larger 308:12	185:15 187:22	195:7 197:14	166:21 167:4
lateral 238:22	188:21 189:20	level 23:7 39:8	167:10,18
laterally	190:16 196:11	80:16 81:1	170:12,18
200:20	197:6,12	83:12 90:21,21	171:9,13,14
latest 60:1,2,10	198:16 200:2	92:3,14 93:3	172:4 173:11
laws 2:5 107:1	200:15 204:22	94:6 95:14,19	286:5
111:1 233:8	205:17 214:1	95:19 131:23	light 220:6
lawyer 97:18	215:22 217:12	138:19 139:11	likely 90:19
97:22 301:2	219:10,12	147:16,20,20	160:3
lay 138:5 238:6	221:17 229:5	148:6,6,8,9,10	likewise 92:10
layperson's	248:14 252:8	148:12,12	limited 126:13
75:3	252:14,17	149:23 150:19	204:21 215:22
lead 15:22	258:22 272:9	152:4,5,6,9	line 7:13
108:9	272:13,23	153:9,10,11	100:15 101:2
leading 2:11	273:8	155:12,17	103:9 107:15
leads 106:11	legal 311:23	168:12 172:23	141:12 144:20
160:9	legitimate	213:11 237:12	177:18 188:22
leak 81:8	142:1	272:15 274:5	200:8 202:20
leaked 81:4,17	length 63:7	276:22 281:5	203:16 204:2
83:15 299:8	230:23 231:1	285:11,12,12	206:17,18,19
leaking 299:23	leon 4:15,19	285:12 287:1	206:21,22
		289:16	209:20,21,22

[line - look]

Page 34

210:15,19,20	lists 147:7	184:2 192:4,5	205:4,18,22
210:21,22	lit 307:3	196:20 203:10	213:8,13 214:8
211:4,5 212:5	literally 112:10	204:22 205:17	216:17 217:8
216:10,11	116:10 127:22	215:19,21	219:2,5,7,9,11
218:4 221:19	145:22 238:23	221:8 231:5	219:12,17,18
224:1,7,7,17	literature	256:19	220:14,14
225:6 226:7	112:18	locks 248:20	225:23 228:9
231:23 234:5	little 54:12 61:3	lodge 84:4,4	228:15,17
235:18 239:17	63:6,7,8 86:7	logic 209:20	229:5,7,12,12
241:15 252:2	137:11 149:12	275:2	234:4 235:22
261:11 263:12	153:8 158:18	logo 176:20	236:16 237:23
271:22 280:22	180:9 181:4,6	177:16,18,19	262:12 270:17
312:4,7,10,13	181:8 184:7	178:6,6 179:13	270:20 272:6
312:16,19	185:20 187:21	180:2,15,19	272:14,17,18
linear 231:22	187:22 189:15	181:2,7,15,17	logos 199:5
lined 198:7	192:15 196:11	182:3,6,9,10	200:11,12,15
200:7 204:9,14	208:13 238:6	183:13,17	231:5 232:17
232:10 234:5	252:20 254:18	185:2 186:17	236:5,5 261:1
237:4,4	271:1 272:9,10	186:18 188:21	261:5,12,13
lines 193:18	273:1,10,20	189:3,19 190:3	262:6 263:2,14
206:13,15	295:6,9,10	190:3,6,10,11	264:12,14,18
207:9 210:9,12	299:13 304:20	190:14,19,19	265:8,20 266:4
211:21 214:14	307:3	190:20 191:3	long 15:20
214:18 215:6	llc 1:10 4:15,19	191:11,13,14	20:14,17 22:19
216:6,14	311:4 312:1	191:17 192:10	57:10,10,11
218:11 240:12	313:1	192:23 193:9	90:21 112:6
270:5	locate 8:6 19:2	193:16,17	144:23 166:18
link 242:21	184:1	194:1,9,13,18	192:8 233:7
list 69:10,11	located 67:23	195:4 196:20	longer 19:11
146:23	253:10 256:23	198:1,4,8,15,16	238:7
listed 147:6	location 79:13	199:3,4 200:17	longitudinal
245:8 246:11	79:19 80:8	201:9 202:6,11	224:6
listened 50:10	85:13 98:17	202:20,23	look 6:19 25:3
listening 87:5	115:12,14	203:3,4,23	25:18 31:13
104:5 135:19	116:1 118:20	204:13,14,22	33:13,21 35:5

[look - make]

Page 35

35:8 46:5,8 52:19 71:20 73:6 76:6 82:1 82:2 94:20 104:18 105:11 115:10 116:9 116:15 118:4 118:20 119:1 120:21,23 130:2 131:6,11 132:21 133:1 139:22 147:15 147:21 149:9 152:14 156:16 181:10 183:18 188:18 198:5 203:7,16 219:2 220:10,21 221:2,3,23 228:4,5 229:12 234:8 235:15 237:8 238:4 242:9,12 248:17 259:3 259:17 263:9 263:11 286:18 286:22 289:5 looked 8:3,10 9:19,22 10:18 10:18 11:11,23 12:20 45:9 68:14,21 73:11 105:2 119:3,9 119:10 131:5 166:3 185:23	198:12 217:10 255:7 264:21 269:12 looking 10:15 12:16,18 13:10 13:11 14:13 18:7 19:23 21:17 22:21 23:5 26:6 34:9 36:2 70:17 110:22 117:7 117:21 163:11 183:21 184:19 192:20 199:23 202:1 204:8 213:5,23 216:18 239:23 240:9 245:20 255:5 258:19 258:22 300:4 looks 16:13,13 16:14 23:6 184:20 193:17 198:20 204:15 301:19 lose 118:15 losing 10:1 loss 7:19 80:13 81:15 lost 38:2,9,13 lot 93:12 94:18 94:19 103:8 162:21 172:23 197:1 254:8 274:11	lots 284:11 303:6 loudly 137:12 low 161:16 165:7 171:1 lower 100:12 108:18 118:14 123:2 166:16 197:8 209:14 210:8,20 212:10 229:10 lowering 106:21 lowest 162:3 luck 220:4 lunch 88:20,21 88:23 89:1 m mac 289:10 made 2:10 11:17 14:22 24:2 63:13 66:13,14 68:15 68:20,22 77:17 86:6,16,20 106:3 116:18 122:18 198:21 215:13 216:2 263:10 270:23 288:23 299:3 300:11 307:1 313:5 magic 178:15 magically 120:9	mail 69:15,16 main 122:13 141:4 205:16 maintained 95:19 make 2:13 11:12,13,18 14:16 15:10 16:3 18:7 19:17 25:11 31:12,19 34:16 35:18 46:19 52:10 60:14 62:9 63:11 78:7 88:21 93:17 96:23 99:2 125:20 126:12 129:10 129:11 135:7 135:11 144:3 148:3,21 149:12 150:14 161:6 162:22 163:19 167:18 169:17 172:3 173:18 174:5 177:11 194:23 205:12 207:12 212:15 217:19 226:22 234:1 236:9 241:14 247:23 270:20 275:19 276:10 283:19 296:15 298:15 301:8
--	--	---	---

[make - meant]

Page 36

306:8 makes 93:13 115:4 279:12 making 64:22 182:1 295:10 man 245:17 manipulating 173:17 manner 310:16 manual 87:15 manuals 57:4 manufacturer 303:4 manufacturers 109:20 139:18 303:6 march 58:6 mark 7:4 123:1 159:8,14,22 160:3 186:6 188:10 189:20 192:13 193:15 194:18 203:10 203:12,14 219:3,8,9,11,17 219:18,19 220:7 251:6 254:20 303:16 304:1 marked 7:7 178:9 179:1 186:10 215:11 251:11 270:4 303:22	markers 158:21,22 159:15 215:11 marking 194:3 196:6 219:22 markings 193:13 194:8 261:11 marks 86:11 159:10,12 190:21 192:10 193:16 200:15 219:22 254:7 254:10,14 258:8 mashman 4:18 5:21 match 106:13 112:13 128:13 199:6,18 202:12 217:16 220:12 228:14 256:6,9,12 263:12,16 265:2 267:6 284:2 286:3 matched 198:13 265:12 matches 166:15 198:15,17 232:2,5 matching 189:18,18 255:14 273:23	material 146:18,21,23 materials 41:13 41:15 45:8 117:6 147:5 245:8,9 246:1 296:16 mathematically 275:13 mathematics 284:3 matter 103:7 165:19 matters 299:16 maximum 171:20 199:1,2 202:16 230:4,5 230:16 231:2,6 231:6,9,14,23 232:7,12,18,21 232:22 238:11 253:9 254:12 262:6 265:9 289:5,7 mean 7:21 9:16 12:14 13:1 18:3 20:9 26:11 28:14,22 29:12 33:1,9 34:1 35:14,15 38:9 40:5 41:2 42:9 53:1 55:8 55:18 62:14,15 64:4 67:8 73:16 75:18	91:1 95:6 97:16 107:16 109:16,19,19 111:7 116:18 120:4 123:12 125:2,2 127:22 128:7 129:4,5 129:6,10,12,12 136:6 139:13 139:15 145:22 147:15 148:2 154:10 155:9 161:18 173:15 175:1,3 180:5 180:14 182:11 184:14 190:13 191:3 192:9 194:21 197:13 201:11,20 203:7 204:9 215:5 237:5 243:21 244:6 252:15 255:11 278:7 279:7 286:18 292:17 298:15 301:10 301:11 308:2 meaning 24:12 173:16 175:14 means 39:7 110:7 136:1 172:10 300:6 310:8 meant 10:3 29:1 147:8
--	---	--	---

250:4 measure 81:21 96:13 154:15 179:10 185:18 191:9,13,16 207:14 214:16 216:13 217:4 217:10,21 218:3,9,10,18 219:1 220:12 228:18 230:11 238:18,21 241:11 242:13 242:14 247:20 259:9 264:19 265:8,16 267:6 267:10 272:15 272:16,20 measured 80:18 82:21 86:16 96:1,6 104:19,23 191:4,11 197:22 213:17 230:9 237:16 247:2 268:3 269:10 measurement 77:4 86:17 192:15 210:4 214:23 232:3 236:9,12 238:22 239:4,9 239:13 240:13 242:15 247:19	264:1,11 267:14 268:6 270:13,23 measurements 14:17 96:12 148:22 179:9 193:7 194:20 195:5,9 207:9 207:12,23 213:6 215:12 216:2 229:8,9 239:1,12 241:1 241:6,12,16 242:1,3,4 243:10,11 246:23 256:16 263:19 267:17 measurer 217:7 measuring 77:3 82:5 242:15 266:3 memorized 111:6 memory 23:3 30:3 68:3 86:22 154:14 154:18,21 167:8 257:6 mention 243:4 244:1 mentioned 111:2 112:23 113:3 132:19 155:22 181:20 253:14 282:21	mentioning 177:22 mesh 198:21 mess 123:5 met 230:23 metal 253:6 method 62:18 177:13 189:5 205:11 206:4 218:14,14,17 238:12 246:11 292:13 methodologies 109:6 281:16 292:11 methodology 105:14 109:10 109:13 110:8 111:17 112:1 142:6 246:17 256:9 261:17 264:8 269:15 273:14 277:4 278:13,15 280:11,20 282:18,23 283:7 289:20 methods 176:18,23 177:8 205:13 217:13,20 244:10 246:7,7 246:12,14 247:5	metric's 89:22 metrics 74:22 middle 182:3 273:6 midpoint 272:5 272:18 mile 39:5 100:7 102:10,11 164:9,10 miles 88:9,14 100:4 101:22 162:18 163:1 163:21,23 164:6 165:4 166:14,22 millions 241:23 242:6 267:17 millionth 238:15 milliseconds 202:1 mind 115:8 203:7 273:5 mine 105:11,14 171:4 289:18 minimal 162:7 minimum 101:13 minus 207:3 208:9 269:9 276:3 minute 52:16 76:10 88:19 89:4 112:5 182:17,21
---	--	---	--

[minute - need]

Page 38

192:1 195:14 197:11 222:10 260:4 minutes 144:19 mirror 78:6 282:23 293:14 mirroring 127:19 mis 124:15 141:9 mischaracteri... 124:15 mischaracteri... 236:3 mischaracteri... 280:2 miscopy 19:17 misfired 261:23 misfiring 137:15 misinterpreta... 263:5 misleading 33:14 215:18 misread 165:9 165:9 misreading 263:4 misrepresent... 115:4 missed 48:15 100:17 122:10 272:10	misses 93:19 missing 13:10 20:20 21:4,17 21:20 22:21 40:15,17,20 43:5,6 82:15 84:15 misspoke 55:3 55:4 misstatement 221:16 223:18 misstates 49:8 111:19 219:16 238:3 279:8 mistake 26:22 31:19 75:10 174:10 204:12 mistaken 12:16 mistakenly 66:10 mistakes 116:18 298:15 misunderstood 65:15 mmc 227:15,20 mobile 5:2 model 130:11 169:23 302:1 modeling 75:1 75:4,15 models 198:21 199:21 modifications 35:1 77:22 78:11 174:5,6	modify 91:11 modifying 91:14 175:12 moment 70:16 month 23:9 58:14 months 8:11 11:2 12:15 19:14 20:1,7,9 20:11,17 25:2 26:8 39:14 58:1,9,22 moon 135:15 morning 226:17 287:12 morse 1:21 4:7 5:1 310:4,22 motion 259:6 motor 308:3 move 61:20 111:13 119:17 121:7 123:4 129:6 146:4 149:12 197:19 201:14 233:12 273:8 moved 8:19 9:2 9:11 122:12,12 122:14 131:1 132:1 156:5 movement 154:1 155:5,6 moves 155:4 moving 118:19 150:19 176:14	201:16 203:7 233:14 multiple 128:3 218:21 278:4 280:19 n n 3:1 name 7:15 32:20,22 250:2 250:10 naturally 212:9 near 85:15 231:8 232:2,11 284:11 necessarily 38:20 56:23 135:13 168:5 278:18 298:12 necessary 2:9 313:6 need 22:22 50:21 51:15,18 61:3,5 88:18 88:23 89:1 101:1 103:13 104:6 113:14 115:22 116:23 125:17 131:17 136:19,19 138:13 141:13 171:18,21 175:23 182:16 210:7 219:6,8 225:1 226:3,4 235:8 247:14
---	--	---	--

249:3 250:21 254:14 259:3 259:17,20,23 274:17 282:20 282:22 286:17 286:22 294:3,8 295:20 302:5 needed 9:12 31:14 39:9 47:14 48:2 82:8 87:4 103:4 138:16 227:3 285:19 needs 34:1 94:8 103:7 116:18 116:19 163:18 164:20 167:18 189:14,14 219:18,19 neither 99:12 156:17 310:14 neptune 62:12 62:19 63:21 76:3,12,17 78:3 neptune's 63:17,17 64:11 never 9:19 10:8 18:21 31:11,12 69:12 77:8 91:6 97:16 106:7 132:19 138:22 139:1,8 144:10 171:14 232:12 279:13	288:21 new 14:11,12 53:13,20 59:1 59:13 60:5 66:1 67:7 83:21 101:1 102:12 109:1 112:21 119:14 119:14 121:2 132:23 146:23 173:19 277:9 282:4 296:9,14 297:4,7,11,12 298:4 newton's 107:1 111:1 233:8 nice 123:1 night 238:6 non 91:7 242:19 nope 149:14 244:22 277:19 normal 34:20 289:11,12 308:17 normally 80:1 84:17 102:9 226:16 288:11 292:11 295:7 299:18 northern 1:2 4:2 notary 1:23 313:13,19	note 138:8 311:10 noted 313:7 notice 2:17 183:18 200:6 228:9 261:5 novel 112:21 ntsa 302:16 number 1:5 7:6 17:17 54:7 59:2 88:16 101:10 120:9 129:3 135:12 148:20 149:2,3 149:6,14,16 151:1,12 152:22 153:22 158:19 160:16 164:18 178:8 186:9 212:23 213:1 229:12 241:6 250:8 251:10 263:7 267:1 273:2,21 302:7 303:21 307:8,15 numbers 14:23 38:20 40:23 41:1 64:21 73:22 107:17 242:7	187:8,12 188:1 193:20,22 196:7,14,19 197:5 o'clock 89:8 229:19 231:17 287:11,12 oath 291:7 object 21:9 49:7 83:23 102:2 111:18 113:21 116:3 140:17 141:7 142:23 143:10 144:23 151:7 211:12 219:15 224:19 225:13 233:4 236:2 238:2 239:21 279:7 280:14 283:3 285:7 305:19 objection 84:4 84:9 117:15 120:17 124:2 124:12,14 131:19 133:17 134:3,6 154:4 158:1 185:3 278:3 279:2 287:2,4 290:16 290:19 objections 2:10 2:13 281:12
		o	
		o 181:23 184:14,15 185:5,8 187:6	

[objects - okay]

Page 40

objects 207:14	offset 85:22	258:9 261:2,20	31:7 32:9 33:4
observation	86:8,15,21	262:7,10 263:3	33:11,15,18
147:10 274:9	87:6,11 100:18	263:8 264:16	36:12 39:16
observed 96:3	100:22,23	265:9,12,13	44:20 48:21
obvious 106:22	101:9,15	266:9,10,14	50:8,16 53:4
obviously 30:7	103:22 104:4	267:5,23	53:12 61:18
37:12 41:6	105:4 106:4	268:12 269:5	62:23 65:1
61:5 92:17	107:12,12	269:20 270:6	72:8,18,22
96:15 122:17	113:19 114:11	272:3 273:14	73:3 74:19
200:3 220:8	114:12 115:6	273:23 274:1	76:18,21 77:11
243:18	115:15,23	275:18,18,22	77:15,21 78:19
occupants	118:10,11,12	276:4,12,15,21	79:2,6,10,17
79:23 85:9,13	123:20,21	277:14,17	80:3,12,16
occurred 87:12	126:20 127:20	278:2,18,22	83:12 84:22
158:13 162:16	128:13,13,14	280:8,8,13	85:18 89:6
162:17 165:4	129:19 131:7	281:5,8 284:2	90:8,14 91:17
276:4 280:9	131:17 132:4	286:9,20 287:1	94:12 98:1,14
occurring	135:3 153:16	293:12	98:22 99:3,18
310:13	153:19,20	offsets 284:4	100:10 101:11
occurs 281:4,7	158:22 166:19	offsetting	101:14,17
october 8:1	167:21 176:15	205:20	103:18 104:21
9:22 10:16,18	176:19 177:2	oh 20:11 22:10	111:9 112:23
11:11,23 14:7	186:8 204:4,19	44:4 66:23	113:19 115:13
15:8,18 16:9	204:21 205:14	164:4 176:2	115:19 128:18
18:5,10,23	206:9,20 208:8	202:14 221:10	131:10 133:20
19:6 23:18,23	214:17 217:11	223:9 230:3	134:8 135:18
25:1,5,14 26:3	220:14 225:5	234:7 254:16	137:3 140:8
26:16,23 28:6	225:17 227:13	254:22 262:2	146:1,14 147:4
29:1,4,10	231:14,19,19	293:2	151:11,17,20
35:12 37:23	238:13,14	okay 6:14 7:10	154:23 156:11
54:12 57:9	243:7 244:4,11	12:20 15:20	157:19 158:17
66:6 76:1	245:5 246:8,13	18:9 19:3,9	160:6 161:4,21
offered 2:15	247:9 248:3	22:6,22 23:12	165:10,17
office 27:17	251:19 255:3	25:10 26:4	170:2,10 171:7
	255:19 256:21	29:19 30:15	175:12 176:4,8

[okay - original]

Page 41

178:18,22	old 14:12 57:20	openly 94:9	284:14 296:9
179:13 182:13	omnipotent	opined 261:20	296:10,13,14
182:16 187:1	131:13	263:1	296:17,18
188:2 189:10	once 33:5,7	opines 171:11	opossums
193:11 194:6	55:15 57:16	opinion 43:22	109:4
195:10 196:5	250:23 266:19	94:13 101:20	opportunity
196:15 204:17	285:10 297:10	103:4 151:22	242:22
205:23 209:9	ones 17:21	161:7,11	opposite
210:1,16	205:7,9 241:14	163:15,18	143:23
211:15 212:4	ongoing 297:18	164:19,22	option 34:12
213:20 214:7	open 31:11,15	165:3 168:19	options 73:16
214:18 215:9	55:12,13 117:5	169:12,17	oral 1:16 5:8
216:10 222:10	214:13,13	171:20 196:16	orange 252:2
223:19 227:7	215:1 226:18	196:22 197:18	oranges 100:19
229:14 234:23	226:23 227:3,3	197:20 199:19	order 36:9 48:4
235:5,6,15	227:5,9,10,11	224:18 231:21	48:12,22 49:5
242:21 245:1	227:17,21,22	232:21 237:22	117:1 161:9
251:12,16	234:14 240:23	243:7 256:1	167:15,16,23
253:22 254:16	241:18,22	274:13 280:4	174:6,7 194:11
258:17 259:3	242:11,11,18	280:10 281:6,9	194:22 214:7
261:22 262:22	243:20 245:14	282:8,9 285:2	259:4 267:22
265:3 266:12	245:14 248:9	285:6 286:10	282:17,23
266:22 267:21	248:15 267:9	291:1 303:15	288:7
269:11 271:9	269:21,22	304:14	orientation
271:18 272:16	297:9,10	opinions 11:13	87:22 160:15
273:2 274:21	opened 8:2,18	11:15 15:19	215:17 223:22
276:1,7 277:21	10:7 12:19	42:7,11,23	224:2,4 230:14
284:16 291:13	31:2 53:19	43:3 44:9 56:9	253:3
294:5,10,20	59:23 60:4	102:22 136:5	orientations
295:3 298:8	65:17 238:20	138:19 139:11	229:11
299:6 302:22	242:17 263:13	157:19 158:12	original 7:20
303:16,20	268:2	168:16,16,16	10:12,15 12:8
305:12 306:7	opening 34:8	168:17 219:13	14:1 15:5,7,12
309:4,7	60:8 297:15	230:20 245:5	17:2,14 18:1
		248:3 251:19	18:13 19:4,11

22:3,11,17 24:13 25:16 26:1 27:10 30:10 32:3 38:8 39:22 41:7,10,22 47:12 48:11,23 49:5 50:5 52:16,20 54:10 57:12 58:7,23 62:12 64:15 65:22 66:3,15 67:10,17,18,21 68:10 75:17,20 76:4,16 77:18 78:8 82:3 85:20 86:12 111:12,14 214:5 228:3,20 234:15 247:17 247:18 254:6 266:7,7,8 267:23 268:10 268:12 269:6 274:17 296:10 298:22 302:6 305:15 originally 10:3 46:18 49:2 60:17,18 64:10 90:2 ought 9:1 123:16 161:19 165:2 168:20	outcome 298:10 outlined 178:5 output 70:4,20 71:8 73:10 outputs 36:2,6 72:5 outside 113:23 114:2 116:4 117:16 122:13 123:4 131:1,15 131:19 132:2,2 136:13 140:18 158:1,5 192:10 280:15 305:6 oval 185:17 192:11 overall 207:16 overhead 159:11 205:11 205:18,22 212:17 overlaid 96:9 96:22 185:23 overlap 132:3 275:5,9 282:10 284:12 overlay 184:11 185:2,11 188:16 189:11 192:1,3 194:1 194:8 195:2 196:20 197:1 198:15	override 93:4,7 93:17 94:2,13 94:23 95:5 103:6,6 118:12 118:13,15,18 124:9 151:22 253:7,9 257:13 258:2 274:14 274:15 290:14 290:15,15,17 305:2 overriding 94:4 oversight 267:12 overstate 275:1 overstates 274:8,22 own 32:19 96:23 161:20 217:13 220:11 226:4,16 243:20 246:3 p p.m. 89:8,12 137:5,8 176:10 176:13 183:1,4 195:18,21 260:16,19 295:23 296:3 309:13,19 p1 3:17 page 3:4,12 9:14 37:17 76:22 82:18 158:20 176:6	183:7 188:19 193:19 199:23 206:2,4 221:13 221:14 222:13 222:21 223:13 223:14,19 225:2,4,8,18 227:16,18 251:13 272:2 312:4,7,10,13 312:16,19 pages 161:4 paid 292:19 paint 159:8,15 252:20 pan 155:17,22 259:7 pane 155:4 papers 110:10 111:3 173:3,10 173:21 174:3 174:15,16 285:17 290:2 paragraph 7:17 37:21 66:20 149:15 161:5 223:21 297:11 298:3,3 paragraphs 177:7 parallax 207:20 209:11 212:9 parameters 89:14 106:13
--	--	--	---

106:14 132:16 140:15 276:14 pardon 81:13 86:4,4 278:16 part 14:10 15:21 18:3 62:7 72:17 75:8 80:10,20 84:5 94:3,4 102:22 114:4 114:10,20 115:2 117:1 124:23 130:4 132:1 170:4,7 170:8 179:14 184:3,10 188:1 199:12,14 202:12 204:12 232:20 245:13 254:7 263:20 267:13 282:22 partial 23:19 partially 207:18 particular 42:11 90:23 183:22 189:5 283:9 286:7 particularly 44:22 299:20 parties 2:12 310:15 partner 75:1,4 75:15	parts 202:15,17 202:18 pass 303:5 309:1 passenger 95:17 past 79:22 128:2 136:14 159:5 173:23 230:1 292:2 301:22 path 202:5 294:21 pattern 201:2 202:8,9 paul 1:21 4:7 5:1 310:4,22 pdf 33:17 34:9 35:7 36:7,10 36:21 37:12 47:7 74:8,12 pdfs 250:8 pdof 231:17 peachtree 4:11 pealing 12:18 people 32:16 128:2 129:10 139:16 186:21 194:17 291:3 292:19 perceive 186:17 194:9 perceived 195:3	percent 100:17 100:18 101:9 124:18 128:8 132:5 150:20 183:16 191:14 215:19 220:14 perfect 77:9 173:18 238:15 perfectly 94:10 231:22 289:22 perform 194:7 performed 32:2 32:6 92:14,18 99:1 111:14 245:21 period 10:9 20:4 24:19 136:1 285:16 permanent 258:13 permanently 238:1 permissible 144:22 permission 98:12 person 31:19 32:2 personally 111:22 persons 233:20 perspective 73:20,21 116:9 116:16 119:8 120:22 125:1,3	125:5 192:2 204:11,16 213:22 230:17 307:22 phase 95:21 phoenix 98:17 photo 159:2 177:15,17 178:14,20 183:11 187:3 191:6 204:8,11 204:16 208:1 209:10 212:9 217:2,9 218:4 218:6 243:1 246:3 248:5,8 251:18 254:8 254:10 photograph 157:2 183:6,8 200:2 205:11 206:8 207:20 208:20 213:21 253:13 255:1 258:23 270:13 271:4 272:7 photographs 85:7 97:7 152:7 186:13 215:13 255:2 271:15 photomodel 177:14 270:15 270:20 271:5 271:12 272:19
---	---	---	---

[photomodeler - possible]

Page 44

photomodeler 178:14,23	230:7 304:17	167:20 178:13	179:1,9 201:5
photomodels 178:12 250:6	placed 99:13,22	179:22 183:12	212:23 231:15
photos 146:22	placement 85:11	185:16,18	238:18 239:1,8
154:21 181:11	places 38:21	187:11 189:2,7	239:9 241:8,10
184:1 220:10	plaintiff 4:17	190:1 191:10	271:19,20
245:10,10,11	4:21	195:1,2 196:23	272:19 298:9
245:20 247:13	plaintiff's 303:18,21	198:22 200:22	poking 293:6
247:15,15,17	304:2	201:1,6 211:19	poles 252:3
247:18,22	plaintiffs 1:8	212:15,22	ponce 4:15,19
256:22 258:11	5:21 301:9	213:12 215:4,5	pools 104:13
271:8,11	plane 204:10	215:7,11	porter 268:3
physical 95:22	plate 252:4	217:15 226:7	portion 176:15
physics 106:23	play 119:5	227:2,19,19	position 79:11
175:2 202:19	please 5:15 6:1	228:1,2 229:15	79:18 99:23
203:15 233:7	48:15 61:4	229:16 230:2	115:17 154:15
233:22 256:2	125:13 138:5	230:16 231:7	186:16 203:6
267:11 275:13	170:9 228:22	231:11,15	228:12 237:23
picked 10:22	234:10	233:1 236:14	252:10
picture 181:13	plenty 112:7	239:14 241:12	positioned 218:17
188:19 193:12	285:17 290:2	242:13 243:5	positioning 123:22 297:16
211:22 235:1	pluck 41:14	245:2 246:23	positions 129:7
piece 119:12	plus 85:8 207:2	252:11 254:12	154:16
160:2,3 220:4	208:8 249:11	255:21,22	possess 53:22
253:6	249:14 250:6,6	257:17 261:1	56:2 59:21
pieces 169:3	250:13 269:9	263:12,16,20	possibility 66:3
pink 188:22	276:3	264:10,14,19	possible 28:23
239:17 240:12	point 67:1	265:2,7 268:8	60:18 107:10
241:15 271:22	68:20 86:7,20	271:5,12,15	107:14 117:13
pinned 236:19	104:6 113:19	287:5 293:12	117:20,22
place 9:10	135:16,17,20	299:15 307:2	118:1 119:20
91:18 92:7,11	135:20 143:18	pointed 68:1	120:1,2,3,16
199:5 200:18	144:2 147:11	pointer 160:8	126:13 128:10
201:10 227:23	152:8 161:6	160:11	128:11,15
		points 113:8	
		155:8 178:16	

[possible - probably]

Page 45

129:1,6 135:2 277:10,18,23 post 249:11,13 249:21 250:4 250:13 potential 38:10 109:17 113:17 161:17 162:1 170:23 potentially 36:8 pounds 78:21 79:14 201:13 299:18 300:1 300:19,22 306:8,11,13,15 306:19,20 307:9,11,20 308:3,5,15,16 308:18,23 309:2 power 162:4 powerpoint 3:15,16 147:14 148:5 185:10 186:1,5,7 194:2,11 197:11 199:10 227:9 235:2 247:10,14 248:11 269:21 powerpoints 152:7 249:16 practically 43:14	precise 40:23 51:1 86:20,21 300:4 precisely 37:22 50:22 87:16 267:4 predict 110:23 112:11 140:13 145:5,18 302:19 predicted 138:20 139:11 predicting 109:13 140:11 144:12 278:15 294:13 prediction 90:16 preliminary 24:1,12 45:16 162:8 premise 204:6 255:16 premium 178:23 prepare 45:5 48:4 117:10 131:11 prepared 13:3 119:13 preparing 35:12 48:2 146:18 presence 91:6,7	present 4:22 5:15 13:6 38:16 226:22 presentation 71:10 246:22 253:20 255:2 presented 194:10 246:19 246:21 267:18 preserved 98:16 preserving 32:11 presume 119:5 pretending 132:18 pretty 14:16 34:20 113:18 244:10 265:19 303:10 prevent 305:3 prevented 97:14 previous 50:14 previously 123:7,8 primary 103:23 104:3 105:5 principles 289:8 print 22:2 24:21 33:5,20 35:17 36:9,14 36:17	printed 10:19 10:20 17:8,20 23:15,16 24:23 25:14 26:13 27:21 28:19 34:10 36:7 37:7 38:18 40:19 46:8,16 46:20 266:19 printer 10:21 printing 23:20 29:6 36:15 printout 9:21 16:16 21:14,15 53:2 74:11 76:9 printouts 10:10 10:14,14 12:7 25:11 30:8 38:6 40:13 48:6 68:6 prior 2:15 10:11 14:1 15:16 16:6 17:21 18:16,19 24:13 27:17,22 29:11,15 36:22 48:2 55:4 56:4 57:9 58:23 111:19 122:1 239:5 240:18 304:15 probable 199:8 probably 6:16 9:4 13:11
---	--	--	--

[probably - provided]

Page 46

36:14 41:3	23:20 27:6	71:3,4 72:12	305:3
46:19 56:3	30:21 32:10,12	84:5 92:2,23	programs
60:7 141:19	42:6,9,13	93:2 142:2,17	34:21 289:1
145:23 155:15	54:21,23 55:8	232:19 239:5	290:5
164:18 208:14	55:14 57:9	239:22 240:9	project 56:13
242:20 248:11	58:1 64:15	249:8 270:1	projected
261:10 262:13	65:23 66:5	310:9	237:17
262:20 268:14	108:8 172:14	produces 13:14	projection
274:7,22 275:6	175:17 266:1	163:16 167:17	206:17,19
problem 9:11	268:11 270:18	producing 47:6	proof 157:3
14:10 18:4	283:11 297:18	93:10 177:14	230:12
25:17 28:3	processed	268:19 288:18	proper 37:4
40:7,9 43:10	136:11	product 267:15	112:16 140:15
58:7 60:21	produce 18:15	profess 217:1,2	145:5,19
100:19 102:5	18:19 22:2,11	professional	191:20 198:2
108:3 116:19	22:13 24:21	120:11	218:19 223:15
119:14,14	29:19 36:22	professionally	275:4,5 280:11
125:11 153:16	39:4 45:19	121:13	288:4 297:21
173:19 175:3	47:7 52:9 88:3	profile 71:5	properly 8:14
176:2 212:22	93:3 226:9	256:10	26:9 30:16
216:16,21	280:12	profiles 205:6	123:19 169:23
233:10 288:21	produced	256:12	217:6 285:4
298:18 308:4	10:10 12:12	program 36:16	298:14 307:22
problems 40:8	13:23 15:7,11	56:14 57:1	properties 62:2
137:13 152:14	15:16 16:6	112:5,9,10,14	proposed
210:10 216:20	17:20 20:21	112:16,21	129:18
216:20	21:6,12,15	122:2 129:14	proved 118:13
procedure 5:4	22:16 25:12	173:8,17	proves 253:7
19:15	27:17,21 28:19	242:11 276:16	provide 31:9
proceed 138:10	29:16,22 30:9	284:19 285:3	65:12 96:12
proceedings	38:6 40:13	285:13 286:6	97:5 114:19
1:16 5:9 310:7	42:21 44:2	286:11 288:17	158:21 164:14
310:12	45:8,17,20	288:19 289:17	186:20 296:13
process 8:8,21	46:12 49:2	292:5,9 297:8	provided 5:3
18:6 20:5	50:5,22 51:19	297:17 302:2	12:7,8 14:19

32:16 63:19 64:19,20 68:2 68:5,8,14,17 74:7,9,17 97:6 98:5,6 142:1 162:8 190:17 214:15 216:15 228:20 243:10 258:12 263:13 263:17 264:1,1 269:18 provides 274:19,20 proving 103:3 proximal 47:20 proximally 47:17 public 1:23 313:19 published 96:7 pull 6:20 222:13 303:12 303:19 pulled 211:8 pulse 95:21 149:17 150:2 150:13 pulses 166:15 pumping 104:17 pure 64:12,13 purely 107:6 112:10 purpose 107:5 166:7 168:22	169:13 286:7 290:13 purposes 47:6 190:23 211:1 push 231:18 266:23 pushed 95:18 156:1 230:5 253:5 pushing 253:11 put 6:15 9:3 18:10,12 19:18 23:16 25:6 32:15,21 40:4 42:14 51:6 72:7 79:12,22 82:8 85:1 91:23 107:17 120:9 124:20 135:12 145:6 145:19 159:5,8 159:10,10,18 160:2,3,10,10 160:18 180:16 203:10 216:7 219:22,22 220:5,19 228:2 230:10 241:8 241:11 247:13 247:15 260:8 267:7,8 268:4 268:14 271:4,8 293:7 301:19 putting 170:21 298:12	q quantified 148:8 quantify 148:2 148:17 149:10 276:2,11 quarter 273:9 quest 249:21 250:4,4,12 question 15:20 15:22,23 17:12 17:16 21:2,10 28:20 30:6,14 34:14,18 38:5 38:12 46:1 49:8,14,17,18 50:14 60:3,4 65:13,14,14,18 75:11 82:4 83:8 85:10 93:15 102:3 105:15 106:8 106:11 111:12 111:13,14,20 111:22 113:10 113:22 114:10 116:4 117:4,11 117:16 119:19 120:12,22 123:14,20 124:4 125:1,3 125:6,10,13,14 125:15,19,20 126:5,9,12 127:13,16,17	128:9 130:15 132:7 133:7 134:1,5,16 135:5 136:12 136:21 139:2,7 140:1,6,10,18 141:8 144:9,11 144:13 145:3 146:2,6 151:8 155:21 161:22 165:11,22 170:5 211:13 218:3 219:16 224:20 225:13 229:21 233:5 236:3,14 238:3 246:10 258:3 258:17 265:5 279:7,8,12,12 279:23 280:15 281:14 283:4 284:5 285:8 286:17 287:6 287:17 288:19 291:14,19 293:5 297:5 305:11,20 questioning 138:2 141:13 questions 2:11 2:12 84:1 100:16 101:2 102:15 103:9 107:16 116:21 117:8 118:23
--	--	--	--

119:3 125:18 130:21 136:10 137:17 140:23 141:14,18 142:9,9,19 143:10 144:6 144:20,20 204:7 304:5 306:4,10 quick 89:4 304:8 quicker 149:13 quickly 69:3 200:12 quite 84:11 174:18 215:14 quote 167:13 169:6,9	ran 10:15 14:7 15:18 16:9,12 17:23 36:21 42:18 45:14 46:13 54:9 65:21 66:18 67:9 74:4 85:14 90:20 100:4 110:6 127:18 128:12 135:3 163:23 168:9 268:10 278:21 279:4 280:6 286:21 293:8,8 random 71:9 72:3 range 130:4,10 161:16 162:5,8 164:7 206:20 207:2,22 208:4 209:15 214:20 218:21 rather 7:11 ratios 79:21 80:1,4 308:20 raw 199:18 read 33:19 38:3 50:9 51:2 69:6 69:21 160:19 166:3 216:3 221:22 241:7 262:22 288:6 291:9 309:14 309:16 311:9	313:5 reading 2:2 98:14 177:6 ready 25:3 real 69:2 78:10 92:18,20 98:23 101:4,5,6,21,22 103:12 143:13 170:16 174:11 294:13,15 308:4 reality 293:23 295:1,1,2,2 realize 63:19 64:18 realized 12:22 20:19 23:5 40:21 42:15 242:19 realizing 13:8 really 6:18 9:1 11:16 15:20,23 15:23 43:6 52:3 86:6 93:5 114:13 123:1 163:13,22 167:14 170:5 179:17,17,18 179:18 191:7 192:9,14 193:2 238:9 242:14 247:21 266:23 301:20 308:10 realm 106:3	rear 95:7,9 99:13,23 122:23 123:1 153:23 154:2,7 155:10,23 156:2,13,20,21 157:4,7,9 175:14,16 208:22 216:19 220:7 223:23 224:3 232:8 258:20,23 reason 9:11 46:10 98:19 120:7,15 160:23 169:18 172:2,7 208:4 237:3 238:8 311:11 312:6,9 312:12,15,18 312:21 reasonable 16:19 22:23 50:17 51:7 63:18 82:9,17 85:5,8 108:20 109:8,11 110:17 114:22 120:10 129:7 129:13 130:3 143:17,18 171:3 283:12 300:5 307:13 reasonableness 285:18
r			
r 182:1 184:9 185:8 187:6 312:3,3 raccoons 109:2 radiator 81:6,8 81:16 299:8,21 299:23 307:4 radius 67:3 rail 180:2 208:3 221:1,2 221:6,11 222:1 222:23 224:8 224:11,11 rails 95:10 raised 286:5			

reasonably 77:8 99:7,10 120:2,3 155:12 216:23 218:1 289:21,22 309:2,3 reasons 119:4 127:11 128:16 133:23 134:4 141:2,4 155:18 171:18 197:1,4 277:19 278:9 281:23 rebuttal 3:14 146:14,15 147:1 176:16 177:3 178:2 183:7 196:3 226:11 243:4 245:2 249:10 270:19 recall 45:2 58:6 161:23 receipt 311:17 received 146:19 reclined 155:12 recognize 66:2 recollection 156:22 reconstruct 246:17,18 reconstruction 109:23 130:16 256:3,11,17	275:15 281:16 281:20 288:12 290:10 record 5:16 61:10,13 89:9 89:12 137:5,8 137:19 138:1 158:21 176:10 176:13 182:20 183:1,4 195:18 195:21 232:11 232:12 233:13 258:12,13 260:6,6,12,16 260:19 295:23 296:3 309:13 recorded 11:14 24:7 266:14 267:13 273:17 red 193:13 206:15,19 209:21 210:20 210:22 211:4 251:22 255:17 255:21 redid 42:16 268:16 redistribute 79:21 80:1,4 redo 19:2 292:8 292:18 reduce 168:13 168:14 reenter 57:22	refer 218:6 251:18 reference 7:14 186:18 189:2,6 189:23 195:1,2 206:3 207:16 210:15 215:4,7 258:7 263:18 263:21,22 303:12 referenced 26:19 218:4 263:23 311:6 references 265:16 referencing 186:8 referring 105:19,20 131:14 270:6 294:17 refined 46:22 reflected 53:1 296:8 reflecting 12:12 refuses 287:16 refusing 248:9 regard 13:23 15:6 17:13 32:3,7 35:1 36:20 52:16 66:16 81:5 85:10 89:17 99:8 157:20	232:21 255:3 regarding 138:19 139:11 243:7 244:3 245:5 247:9 248:3 305:15 regardless 87:6 123:21,21 155:18 167:20 201:4 regards 283:1 regenerate 39:9 regular 74:23 75:22 relate 30:10 43:1,5 44:2,4,5 284:7 related 10:12 12:7 15:12,15 17:13 19:4,11 27:14,19 29:16 29:20 30:17 42:19 138:3 155:21 226:10 275:13 relates 113:13 131:16 143:1,4 169:16 relating 2:6 relationship 236:22 281:17 282:15,20 284:18 relative 92:14 119:9,11
--	---	--	---

154:16 155:8 203:5,6 213:4 relevance 273:22 relevant 38:11 42:7,22 136:16 136:17 141:15 141:21,22 142:22 259:12 259:19 274:1 reliability 142:5,18 143:2 143:4 reliable 56:21 109:12 111:17 112:1 143:20 143:20 144:5,7 144:12,16,17 145:12 190:23 216:23 277:4 278:14,19,20 278:23 279:3 282:18 294:13 reliably 145:5 218:5 reliance 243:5 relied 26:16 49:3 rely 244:14 245:3 247:8 relying 45:18 45:20 205:20 244:2 248:2 255:1	remained 152:5 remarkably 154:19 remember 16:14 25:23 26:1 29:18 30:2 35:23 40:18 45:10 67:22 98:13 104:14 128:6 130:4 148:21 149:2 155:7 167:13 199:7 215:10 217:15 245:9 265:19 265:23 remembers 45:7 remote 5:6 remove 285:10 renders 118:10 reopen 235:4 repeatable 192:18 193:1 repeatedly 88:11 rephrased 287:19,19 replaced 75:23 replicate 115:21 report 3:13,14 7:9,12,14 14:20 15:9 18:11 19:6	25:8,22,23 26:1,5,8,17 28:6,10,14 30:19 33:5,6 34:11 35:12,17 36:2,21 37:23 38:15,19,21 40:23 41:1,5 46:22,23 47:2 47:15,16,17,18 47:21,23 48:3 48:4 50:21 51:9,14,20 52:21 53:1 61:19,23 68:12 68:19 74:10,18 83:22 84:5 88:13 96:21 105:22 112:14 113:23 114:5,8 114:15,19 115:2 116:5 117:17 124:8 124:16,21 141:16,16,23 142:7,12,17,21 142:22 146:14 146:15,18,19 147:2 149:11 154:16 158:18 176:16 178:2 183:7 196:3 199:13,14 208:9 214:3,6 215:1,2,15,18	220:1,19 221:7 222:7,11,12,17 222:18,21 223:5,8,11,20 224:22 225:8 225:15,18 226:11 232:10 243:4 244:2 245:3,15,18,19 246:6 249:8,10 249:17 257:2 266:7 269:7 296:8,11,12 305:7 reported 39:7 102:20 215:21 225:21 reporter 1:21 1:22 5:1 6:1 310:4 reporter's 310:1 reporting 130:8 reports 11:5,8 21:14,15,22 22:13,16 23:1 23:5,10,14,19 25:12 27:9,14 27:18 31:5 38:17 39:7 40:18,18,22 41:18,19,19 46:16 68:6 69:4 73:23
---	--	--	--

[reports - right]

Page 51

74:6,13,16 105:18 106:10 131:20 141:21 225:18 represent 30:8 71:16 193:18 202:22 206:14 206:16 253:1 representation 12:2 14:5 16:5 69:8 71:19 72:6,14 96:16 96:17 108:17 114:22 219:12 229:18 238:10 representative 15:17 16:8,11 16:17 17:1 36:4 70:20 73:8,22 91:4,5 93:14 123:18 128:20,23 129:13 135:14 200:16 202:7 230:2,3 233:1 233:23 259:13 277:3 represented 105:12 123:20 215:20 231:10 261:14 representing 229:15 231:5 represents 150:11 230:16	271:23 275:4 310:11 reproduce 22:23 37:22 39:12,22 40:4 41:7,9 44:11 48:12 49:5 56:4 reproduced 27:2 50:12 reproducible 193:1 requested 97:10 require 177:3 303:3,3 required 313:13 requires 177:4 rerun 12:20,22 15:5 16:19 30:15,17 32:7 36:20 39:16 41:22 42:3 45:14 46:19 50:18 53:1,19 55:23 57:19 58:1,10 59:9 60:22 61:22,23 63:23 64:4,22 66:1 68:16,23 70:9 72:15 73:9 74:5,7 77:1,16 80:10 87:7 89:15	92:21 98:23 106:6 research 82:16 290:2 292:19 resend 222:14 resists 150:21 respect 180:4 225:17 respond 121:9 response 119:18,21 120:10 responsible 136:11 responsive 121:11 rest 81:18 197:17 210:13 227:14 231:14 restroom 61:4 136:19,20 137:1 295:21 result 17:2,5,8 39:4 40:14 41:16 51:7 56:21 93:10 132:15,19,20 286:21 293:13 310:16 resulted 7:19 153:23 157:21 results 15:14 16:14 25:7,13 34:9,10 35:5,6 37:13 51:8	74:12 115:9,10 130:8 144:12 145:19 166:22 289:17 294:1,1 294:3,5 301:8 resurrect 11:9 28:16 43:14,19 retrieve 8:3 return 311:13 311:16 reveal 232:15 revealed 232:13 reverse 237:19 review 33:4,7 35:5 311:7 reviewed 245:17 reviewing 183:23 revisit 137:20 141:3 rewrite 298:3 richard 4:10 rick 5:18 69:14 240:7 260:7 ridiculous 118:8 239:22 right 6:21 7:1 10:2 11:18 12:3 13:21 15:3 16:20 17:4,6,12 18:21 21:1,13 21:16 22:1,8
--	---	---	---

[right - rolling]

Page 52

22:15 24:14	88:8,17,23	186:4,12,20,22	240:20,22
26:12 27:9	89:2 90:3 92:5	187:3,15,19,23	243:3 244:9
30:11,17,21	92:10 97:2,10	188:1,11,14,18	248:17 251:3
31:23 32:6	98:19 99:11,15	189:6,12,13,17	251:15 252:6
34:6,11,22	101:19 105:3	189:21,22	252:10,13,15
35:4,11,21	106:12 111:11	190:4,12 191:3	253:21,23
37:16 39:4	115:11 121:12	191:8,15,15	254:9,12,13,23
40:11 41:4,6	121:13,16	192:3,6,12	257:7,10,18
42:18 44:14,23	127:18 133:22	193:18 194:10	258:6,19 260:2
45:4,13 46:4	138:12 143:8	194:21,21	260:2,14 264:2
46:20 47:5,11	146:12,17	195:6,10,22	265:14 267:1
47:23 48:5,17	147:9,10	196:2,11,12,13	268:1,9 269:4
51:5,18 53:3,7	148:11,17	196:17,18	269:8,11 270:3
53:9,21 54:9	149:6,7,16	197:3,8 199:12	270:9,12,22
55:7 57:20,21	150:12,23	199:23 203:2,5	271:3,21
57:21,23 58:4	151:10,12	203:19 206:1,7	272:11,14,21
58:14,20 59:3	152:22 153:12	206:12 207:19	273:7,12,13,21
59:7,16 60:12	153:22 154:21	208:15,19,21	273:22 279:5
61:1,18 63:2	155:21 157:1	208:21 209:6	281:3 286:15
63:11,13 65:21	158:6,9,16,20	209:19 210:14	290:20 293:7
66:4,4,12,18	160:2,16,19	210:18 211:3,7	295:4,14
67:8,11,12	162:7,14 163:7	211:18,18,20	296:21 298:7
68:11,13,15,19	163:19 166:19	212:14,18	298:11 299:6
68:23 69:1,7	167:14 169:9	213:15 214:1	303:2 304:1,7
70:1,3,8,17	170:15,20	217:22 218:12	306:1 308:2
71:13,14 72:11	171:10,12,13	219:4,9 220:22	309:11
73:13,13 74:2	172:2 173:20	222:2,6 223:21	road 4:12
74:2,11,19	174:4,12 175:6	224:14 225:10	robust 41:2
75:16 76:9,11	175:21 176:14	226:9,14 227:6	122:2 168:17
76:21 78:3,10	176:17 177:13	229:6,10,17,21	169:22 284:11
78:12,14 80:7	178:3,11,21	231:4,8 235:15	285:3 292:13
81:20 82:18	180:12,18	235:21 236:8	300:22 302:7
83:1,6 84:8,14	181:1,6,6,10,21	238:17 239:4	rock 205:8
85:18 86:3	182:8,13 183:5	239:16,23	rolling 224:5
87:10,18 88:7	184:17,22	240:3,5,10,17	

[roof - scale]

Page 53

roof 200:8 204:2 206:18 206:23 208:11 209:13,15,16 209:17,18 211:22 302:11 room 34:3 rotate 73:6,18 rough 1:10 5:19 97:13,17 97:19,22 301:2 303:17 304:15 311:4 312:1 313:1 round 201:23 rounding 38:23 routinely 215:10,12 row 83:3 156:14 ruler 266:15 rules 2:6 5:4 run 8:1,4,21 13:13 15:1 18:13 21:11,17 22:7 23:11 29:23 31:8,10 31:22 33:8 36:4,5 38:12 39:10,13,23 41:21 42:20 43:16 45:18,19 46:1,8,15,18 47:2,4,6,11,17 48:7 52:6 53:5	53:5 54:11 55:23 58:9,12 58:15,19 66:3 66:15,15 69:8 71:1,9 77:18 78:8 92:4 100:23 101:22 103:13 115:20 129:1,3,17,18 135:2,4,9,12 136:21 152:13 166:17,21 168:3 169:20 170:12 171:12 171:14 174:6,7 175:23,23 187:21 276:13 277:13,23 280:5,17 291:10 292:21 294:18 296:23 296:23 297:3,6 298:22,22 302:9 running 25:15 31:20 34:12 59:8 65:6 149:11 161:13 166:10 170:18 171:9 222:3 299:2 runs 24:7,12,12 33:5 45:16 297:21	rws 1:5	167:1 169:12
		s s 188:22 289:10 312:3 sample 71:7,8 71:15,18 72:4 72:7 santana 1:7 311:4 312:1 313:1 sat 226:17 save 8:8,22 30:16,22 31:12 32:13,19 33:3 39:23 48:7 297:22 saved 8:13,14 9:2 18:11 33:16 42:2,13 226:21 267:14 saves 35:10 saving 18:6 31:18 32:10 saw 45:10 97:4 saying 10:13 15:14 25:14 26:4,14 32:9 40:12 49:20 71:18 76:3 96:5 101:3 103:10 118:22 121:11 124:11 132:20 133:6 134:19 145:10 164:7 166:20	169:19 170:10 171:8 173:13 174:14,15,16 175:8 186:15 191:8 198:9 203:22 211:14 213:3,4,11 214:2,9 215:3 218:5 235:21 236:5,13 244:1 246:5 261:4 262:17,17 263:22,23 264:12,20,21 278:19 279:14 281:3 says 7:13 53:7 53:9 75:5 145:11 147:5 153:22 154:7 155:20 164:12 164:13 167:7,9 173:4 208:9 217:11 221:12 221:12 222:21 223:22 224:4 232:10 234:23 245:17 249:21 256:5 263:1 281:3 292:13 308:19 scale 87:15 160:12 213:5 241:4,4,5,5,9

[scale - seeing]

Page 54

242:2 266:16 scaled 241:1 scaling 210:7 216:20 scan 63:13 75:23 87:2 198:19,22 234:3 235:17 235:23 239:5 239:16 245:19 246:11 259:9 261:9 270:14 271:6,7,10 273:16,18,18 scanned 146:21 246:21 scans 63:12 87:22 245:4 261:1 263:2 264:10,12,14 265:6 scenario 103:2 163:14 171:22 284:1 scene 83:16 238:1 242:8 schedule 33:23 scheduled 19:19 science 233:10 233:21 282:22 283:1 scientific 280:11	scientifically 109:12 111:17 112:1 278:14 294:12 scooter 308:3 scope 106:10 113:23 114:2 131:20 136:13 140:18 142:5 158:2 280:16 305:7 scratch 27:12 27:14 37:16 57:19 58:12,16 58:19 59:17 screen 6:12,22 26:7 37:18 46:9 61:16,17 61:19 69:4,19 72:13 146:10 146:10 183:6 187:11,13 188:6 195:10 195:23 196:3 211:15 227:8 234:23 235:16 240:2,12 248:7 248:19 260:8 303:19 script 52:9 se 247:19 seat 79:14 83:3 92:11 99:22 153:23 154:2,5 154:7,16,17	155:2,3,6,8,10 155:16 156:2 156:14,21 157:4,7,9 182:18 258:23 seats 85:9 second 27:15 37:17,21 38:17 69:2 83:3 115:2 125:9 156:13 158:19 182:14 200:1 201:16,17,22 211:8 225:2 234:15 254:16 276:7 303:20 secondary 153:2 seconds 162:2,4 section 75:9 147:11 sections 61:20 secure 95:14,15 see 6:19,21 7:18 14:17 36:16 46:5 52:20,21 61:17 66:19 69:10,11 69:14,16 73:10 73:21 76:6 78:20 105:9 109:6 118:8,21 123:1 146:10 149:1,8 158:18 159:11 160:9	163:20 173:1 182:14 183:11 183:22 184:6 185:16 186:2 187:4,6,8,12,16 190:18 191:22 194:17 196:2 196:17 197:6,9 201:7 205:5 208:20,22 209:5 210:1 211:3,6,15,21 212:1 216:3 219:3,17 220:10,23 223:2 227:22 228:8,11,16 234:15,16,18 234:19,20,20 235:12 237:9 237:10,11,15 241:14 244:15 244:17,21,23 247:21 248:10 250:9 252:5 253:23 254:2,7 254:15 258:4,5 258:14 259:21 259:23 266:18 270:3,17 272:6 274:9 276:15 283:11 290:20 295:19 303:20 seeing 118:8 298:10
--	--	--	--

[seek - side]

Page 55

<p>seek 164:11,12 164:13 seem 143:18 167:21 181:12 249:1 seemingly 78:13 seems 161:18 230:19 seen 9:4 69:4 69:12 70:3,5,6 70:22 71:6,10 71:19 82:10 92:19,21 96:8 109:16,19,20 139:16,17 140:14 260:1 262:12 265:2 279:4 281:20 286:8 302:14 302:15,18 seize 153:9,13 153:17 256:22 256:23 257:5,8 257:18,23 sells 110:11 semantics 266:13 send 222:20 260:7 sending 276:8 sense 102:19 279:13 sent 30:19 31:6 184:10 185:11</p>	<p>185:12 222:12 250:1,1 311:14 sentence 75:12 75:14 sentences 224:9 separate 93:15 116:12 129:23 199:13 sequence 236:15 series 159:15 server 32:15,21 set 207:23 213:2 215:12 268:2 281:8 seven 58:22 153:22 several 232:23 shake 295:16 shape 19:1 63:11,13 181:20,20 196:17 254:6 288:15 shard 85:4 shards 84:23 299:11,12 share 6:12,13 146:9 195:23 227:7,9 248:7 248:20 303:19 shared 69:18 234:21 sharing 61:16 182:14 234:16</p>	<p>248:18 sheet 311:11 shift 95:10 shifted 197:12 shifting 155:16 237:9 short 96:2 shorter 238:5 shoulder 35:9 shoveled 84:18 show 38:22 73:15 90:7 96:14 103:8 152:7 154:21 154:22 156:4 159:2 164:13 167:10 168:1 168:22 172:16 172:17 177:17 188:16 194:19 217:17 222:8,9 225:2 226:3,4 226:6,20 230:21 240:15 241:16 242:2,2 242:12,18,21 242:22 243:20 245:11 247:11 247:14,16 248:5 255:7 262:18 263:17 282:14,21 284:3 290:2,14 296:9</p>	<p>showed 24:7 96:22 183:21 192:1 232:13 243:13 303:17 showing 46:10 70:21 72:3 78:15 177:4 178:23 179:7 194:19 199:7 239:14 240:8 242:5,23 243:11 249:17 shown 16:17 39:2 85:6 225:1 231:20 243:6 shows 38:22 92:1 95:23 157:2 177:2,5 178:6 188:20 198:13 199:5 215:16 221:1 221:13 225:4 226:5 228:1 232:6,19 251:22 252:1 253:14 257:10 263:14,15 sic 89:22 185:1 side 64:21 73:14 95:11,16 95:17 142:20 153:21 183:15 187:20 200:2</p>
--	--	---	---

[sideways - simulation]

Page 56

sideways	simpler 16:3	42:3 43:15	107:12,21,22
137:11 233:12	simplest 205:5	44:10 45:15,19	108:5,6,11,14
233:14 237:11	261:12	46:13,15 47:16	110:5 111:23
237:12	simply 126:19	47:17,19 48:12	115:20 117:23
sign 309:15	218:3 288:11	48:13,23 49:6	118:2,6,11,18
311:12	simulate 48:23	50:6 52:6,15	119:10 121:3
signature 2:2	117:2 118:23	52:17 54:10	126:22 127:19
310:21	126:16,18	55:11 57:12,13	128:12 129:1
signed 311:19	172:8 173:1	58:8,15,23	130:2,7,9,11
significant	285:4 288:13	61:22,22 62:13	132:16 138:18
104:4	302:16 304:16	64:13,15 65:22	139:9 142:2,4
significantly	305:1	66:19 67:10,14	143:21 149:20
147:12 148:19	simulated 64:4	67:18,21 68:10	150:3,5,15
silver 194:14	101:16 150:6	68:10,18 70:4	151:18 163:14
similar 14:14	simulating	70:10,21 71:3	164:16 167:23
16:23 41:4,16	133:8,15 134:2	71:22 72:3,15	167:23 168:3,9
50:19,23 58:11	simulation 7:20	73:1,5 74:5,7	169:20 171:13
70:7 71:5	7:23 8:22,23	74:20 75:17	171:14 174:8
85:12 181:19	9:7,15 10:12	76:4,15 77:1	266:8 267:23
193:15 256:18	10:16 12:8,12	77:16 78:17	268:2,4,7,10,13
262:14	13:14,17 14:1	79:8 80:10	269:6 276:13
similarly	14:7 15:5,6,7	82:20 85:14,20	276:14 277:6,9
264:19	15:13,14,16,18	85:21 86:12	277:14,15
simon 289:10	16:9 17:3 18:1	89:16,21 90:6	278:1,21,23
simple 13:5	18:10,13 19:5	90:20,23 91:12	279:1 280:5,6
19:15 113:18	19:11 20:22	91:17 92:6,8	280:7,10,12
116:16 119:19	22:4,12,18	92:12,22 93:8	281:21 282:2
121:17 123:21	24:13 25:13,16	96:2 98:23	282:18 283:17
124:20,23	27:10,19 29:17	99:5,12,19	285:3,13 288:1
125:3,5,12,13	29:21 30:10	100:1,5,7	288:8 289:16
125:13 126:7,8	31:8,10 32:4	101:3,4,23	290:4 291:9,16
127:16 134:22	36:4 37:22	103:13,20	291:20 292:5
159:14 270:2	38:2,8 39:13	104:1,10 105:7	292:22 293:1,9
283:23,23	39:22,23 41:7	105:13 106:1,6	293:10,14,18
	41:10,22,23	106:7,13	294:4,7,12,14

[simulation - sorry]

Page 57

294:15,22,23	129:16 131:10	254:4,16 255:4	276:19 278:14
296:22,23	132:6,9 136:7	255:4,9,13	282:19 288:5
297:3,6,14	141:1 143:9	257:2 258:4,20	290:5,22
simulations	156:9,11	258:20 270:8,9	291:10 298:1
24:14 41:21	173:11 174:13	270:9	solely 49:3
42:20 70:23	209:1,8 264:23	slides 188:15	131:16
85:23 163:3	269:5 306:6	slight 100:5	solid 205:8
277:16 289:10	sits 280:20	slightly 44:11	solutions
291:11 293:21	sitting 34:13	94:1 168:18	311:23
293:22,22	119:13 130:16	193:9	solving 40:10
simulator	277:11 302:13	slope 149:17	somebody 8:18
294:8	situation 60:15	150:2,13	19:20 53:20
single 32:18	173:11 290:23	slow 164:20	60:21 71:21
282:11	291:1	slower 100:7	73:8 107:17
sir 6:23 37:20	situations	100:10	185:20 191:12
46:17 49:12	144:6,7 162:9	small 69:6	272:23 276:8
50:13 54:8	six 58:15	201:20 220:3	someone's
57:7,22 58:11	152:22 199:8	smaller 308:10	215:23
59:2,6,15	208:14 218:22	308:13	somewhat
61:17 85:4	231:17	smart 132:7	94:21
88:16 91:22	size 66:19 67:2	smeared	sorry 16:2
99:7,10 122:5	67:8,12,15	185:20	29:11 48:17
138:10,23	68:13,21,22	sneddon 75:6	50:13 54:2
146:11,16	157:12 181:16	75:10	95:1 121:15
147:3 148:16	266:18 306:19	snyder 4:15,19	124:22,22
156:23 158:8	sizes 66:13,16	software 31:16	128:1 137:10
162:13 181:22	66:17 78:5	34:8 35:2	149:11 157:16
183:10 192:2	slice 157:5	52:17 53:6,14	158:19 164:4
193:10 208:18	sliced 148:6,6	56:1,19,20	184:5,15 188:6
244:15,15	slide 183:22	62:3,7,10,22	188:7 214:2
251:5 258:11	188:13 248:14	79:15 90:11	229:3 240:20
sit 28:2 29:5	248:16 249:3	107:14 115:14	249:20 250:9
31:13 34:22	251:5,12,13,20	140:10,16	253:17 255:6
57:6 68:3	251:21 252:1	145:6,20	258:18,21
116:22 118:4	253:15,19,23	179:10 271:18	276:9 283:14

[sorry - stock]

Page 58

287:3 293:19 295:6 306:2 sort 178:5 sounds 116:16 source 259:18 southeast 311:15 space 157:6,8 157:13,14 spacing 214:3 speak 137:12 155:13 speaker 128:5 speaking 213:10 special 288:14 specific 79:19 80:8 113:14 114:10 202:22 specifically 45:11 80:19 95:9 109:23 198:14,17 220:19 246:5 301:16 302:4 specifications 300:9,9 specs 208:12,17 307:5,7 speculate 121:22 speed 86:3 88:8 88:13 100:3,4 100:10,12 102:17,20,23	103:14 110:16 110:22 112:11 161:9,12,16,19 161:19,20 162:19 163:2 165:12,15,20 166:2,9,11 167:3,19 168:4 168:8,13 170:15 171:1 171:20,21 285:20 288:17 speeds 102:6 113:4 163:19 285:21 293:10 297:17 spin 242:12 spit 276:16 spoke 301:6 spot 202:22 221:5 spread 34:3 staff 26:10 stamp 190:21 190:22 194:18 200:15 232:1,3 243:16 stand 238:5 standard 130:5 281:15 standpoint 118:6 stands 84:7 start 6:11 17:15 24:16	40:21 55:15 56:12 57:9,17 57:18,23 59:16 93:16 101:1 108:6,8 116:20 117:3,5,7,7,21 118:6,19 154:17 162:12 172:14 173:17 178:19 259:21 282:6 284:21 297:14 306:20 started 12:21 23:1,4 29:3 53:18 54:19,22 55:8,12,14 57:16 119:21 180:6 194:12 203:13 253:6 300:12 starting 5:16 123:5 175:6 306:18 307:2,6 state 7:18 275:16 282:5 293:19 310:2,5 stated 149:15 162:1 221:11 221:18 statement 84:7 95:6 125:14 165:11 225:15 233:15 234:1 263:10	states 1:1 4:1 149:17 223:13 station 34:23 stay 55:16 57:17 60:16 249:1 stayed 55:20 56:16 95:12 152:18,20 stenographic 310:8 step 9:6 stick 53:17 159:5 181:8 184:9 sticking 182:5 sticks 153:7 184:9 252:16 stiffer 64:1 stiffness 62:2 62:14,18 63:15 63:16,22 64:17 64:20 78:2 110:3 112:8 175:13,15 285:19 288:16 301:17,21 stihl 82:1 stipulated 2:1,8 2:16 stipulation 5:5 stock 110:1 173:6,15,16 174:6,9
--	---	---	---

[stop - sure]

Page 59

stop 118:20 182:13 234:16 248:18 storage 82:12 82:14 straight 177:6 187:20 224:6 232:8 stress 110:18 strike 107:1,4 111:13 119:17 121:7 297:4 striking 152:23 203:3 strong 95:14 stronger 64:1,3 64:4 149:22,22 150:18,21 241:21 strongest 205:3 struck 223:23 224:2 structure 92:1 92:15 95:8 107:2 122:4,4 122:9,9,11,14 123:2,23,23 124:10,10 152:4,15 170:1 170:1 172:6,6 274:16 301:12 305:5,5 structures 95:15 110:21	stuck 180:1 217:23 218:14 242:10 253:8 298:17 studies 302:18 study 92:15 103:8 108:19 109:2,3,7,17,21 110:11 116:7 132:9 139:14 139:18 144:16 172:5,22 303:8 studying 92:13 136:2 stuff 26:9 34:20 43:20 115:12 130:13 144:23 155:13 156:16 160:5 173:6,7 222:15,16 style 74:23 76:5 295:7 subject 67:9 74:23 78:6 106:20 108:15 108:17 135:23 136:18 150:11 157:9,13 172:20 179:8 179:16 186:14 193:2 201:3 257:12 261:2,3 261:23 262:4 263:3,8 264:3 264:5,6,9,10	265:10 266:11 270:14 273:15 274:1 299:9,9 301:3,3 subscribed 313:14 subscription 54:3 sudden 129:19 suddenly 23:4 suffered 80:13 84:11 suggestion 239:21 suite 4:12,16,20 31:16 36:18 summarized 25:7 summarizes 141:9 summation 148:12 sunroof 89:17 89:18 90:6,7 90:10,10,13,15 90:22 91:13 99:18 301:5,7 301:8,15,20 302:4 sunroofs 91:5,9 super 76:11,16 76:17,18 supervision 310:10	supplemental 14:20 83:22 105:18,22 114:6 116:4 117:17 131:20 140:19 141:16 141:21,23 280:16 305:7 305:17 support 138:19 139:10 243:11 251:19 301:13 supporting 51:17,19 95:8 296:16 supports 113:2 256:1 suppose 211:11 supposed 28:12 28:15 29:5 156:4 201:8 225:5,6 286:6 sure 6:16 7:13 7:17 10:13 11:18 14:22 15:10 16:2 20:3 21:3 23:9 25:11 35:3 45:9 46:20 64:22 66:17 68:15,22 72:11 86:5 87:6 93:17 99:2 103:2 104:8 108:16 109:20
--	--	---	--

[sure - tell]

Page 60

124:18 127:10	t	talk 15:4 34:15	tank 80:17,23
135:7 137:2	t 312:3,3	45:5 52:14	81:2 83:13
159:4 162:22	tail 184:7,16	74:20 98:22	299:20
162:23 163:19	tailgate 86:11	103:18 152:23	tanks 104:16
166:12 167:18	252:3,15	158:20 160:17	104:17
169:17 170:10	tailgates 107:4	161:22 175:6	tape 159:16,17
172:3 174:22	take 14:15	299:13	159:20,21,22
177:11 182:8	31:15 32:14	talked 77:23	160:2,4,18
183:16 194:23	60:22 61:3	97:16,22 98:2	161:1 200:8
203:21 205:12	76:10 88:19	128:16 133:19	210:12 216:7,9
211:17 217:19	89:3 109:5	197:8 259:5	217:7,10
223:3 227:5	115:13 116:7	270:21 277:19	219:22 220:5,6
228:23 244:18	116:15 119:1	295:17	224:17 235:17
245:16 247:23	120:23 128:11	talking 6:20	252:20 253:14
248:6 259:7	136:23 138:15	7:10 30:13	254:7,10,14,19
260:10 265:6	143:10 174:11	69:3 76:22	254:20
265:19 273:3	175:18 176:3	94:5 100:21,22	target 160:10
288:23 293:5	182:16,20	101:17,19,20	202:4
295:10,20	191:13 194:22	122:1 141:2	targeting 112:7
296:16 303:10	211:19 214:4,4	145:7 153:8	targets 159:15
306:9 307:1,12	215:1,13 217:7	154:5,8,8	taught 256:10
307:14,18,19	217:8 222:10	158:7 159:21	teaches 291:2
surrounding	241:5 260:3	159:22 175:7	teaching 94:16
38:18	286:17 287:15	185:5,6,7	technical 7:19
survive 23:10	290:16 295:18	186:3 189:11	7:22 8:12
survived 11:22	taken 61:11	196:5,8 201:15	34:21 138:3
suspect 9:20	89:10 137:6	201:15,16,17	182:18
swear 6:1	176:11 183:2	203:2,4 210:8	technique
switching	195:19 204:8	210:14,16	214:19
264:2	260:17 296:1	223:5,9,10	tedra 4:14 5:20
swoop 193:21	310:7	225:16 255:10	188:9 311:1,2
sworn 6:5	takes 47:20	264:4,5 281:1	tell 14:10,11
313:14	55:10 57:10	296:21 308:7	16:11,15 17:7
system 65:8	108:22 127:14	tame 120:23	17:9 116:13
	132:21 298:14		121:19 132:19

[tell - testing]

Page 61

132:23 133:2,4	102:18 103:5	163:23 164:10	280:9,18 281:2
154:9 159:13	103:12 104:2,5	165:23 166:7	283:9,22 284:8
159:17 170:14	104:11 105:6	166:11,13	288:7 291:17
187:14 219:2	105:12,13,21	169:3,13	293:8,13 294:1
219:23 258:23	106:4,19 107:6	170:12,18	294:2,6,8,11,18
271:19 276:20	107:7 108:1,3	177:14,17	302:9,12,21
280:19 282:1	108:7,11,23	179:2 180:5,8	303:3,5 307:22
284:17 285:20	110:18 113:14	180:9,17 183:8	tested 50:12
289:4 290:17	113:15,20	183:8 184:1	77:13
302:1 305:22	114:21 116:2,9	185:2,18 186:8	testified 6:5
telling 27:20	117:2 118:5,13	186:14,16	23:15 24:6
43:18 127:4,13	119:1,9 121:3	200:3,3,15	26:17 37:8
143:13 220:13	123:18 124:1	201:3 204:1,1	48:22 124:8,15
242:1 279:20	124:11 126:19	205:14,21	160:17 224:16
297:16	126:22 130:11	206:5,8 207:23	264:7,23
tells 150:17	130:16 133:9	211:9,16 218:1	290:21 304:23
ten 287:12	133:16 134:2	221:16,20	testify 24:8
tend 55:15	136:16 140:14	222:3 223:11	220:16 279:22
tenth 202:11	140:16 141:15	227:15,20	testimony 49:4
225:18	142:12 143:5	237:20 243:8	49:8,22 124:16
term 9:16 10:1	144:13,18	245:6,21 246:8	140:3,19 141:9
10:5 93:23	145:5,8,18	246:13 247:9	158:2 162:10
283:23	146:22 147:12	247:11 248:4	187:2 219:16
test 48:13 49:1	147:17 149:18	252:2,7 254:3	236:4 238:3
50:5 65:6	150:7 151:2,13	256:20 257:22	247:8 263:5
74:12 77:5,12	151:15,23	258:16,21	279:8,21 280:1
91:3 92:18,20	152:11,13	259:12,18	280:17 290:21
93:5,14 94:23	153:1,13,15,18	261:21 262:3	305:14 311:9
95:13 96:3,6	153:23 154:3	264:3,5 269:20	311:17 313:8
96:15,16,18	154:17 155:1,2	270:6 272:2	testing 77:6
97:8,11,14,20	155:11,19	273:23 274:12	95:5 99:20
98:5 99:1,5,12	156:5,14,15,20	274:17 275:17	100:1 101:15
100:3,6,17,23	157:15,20,23	276:5,22 277:6	103:20 106:15
101:4,6,7,8,18	158:8,14,20,21	277:7,10	107:13 111:15
101:21,22	161:2,13 163:9	278:19,20	113:6,7 114:9

[testing - thousands]

Page 62

114:11 115:21	134:23 167:5	24:11 25:7	261:19,22,22
118:2 122:8	170:17 175:5	27:15 28:6	262:11,20
128:13 165:16	178:22 180:7	39:5 47:3	266:2,2,3
176:21 227:17	180:19 197:9	49:19 55:2	268:14 269:13
227:18 302:16	201:18 228:9	63:17 65:11,13	276:23 284:10
302:17 303:1	232:18 297:7	65:15,18 66:10	286:3,5 290:1
303:10	297:14	67:5 69:15,18	290:7 300:20
tests 104:12	things 12:22,23	73:18 81:9	301:6 302:14
165:20 301:21	13:4 19:14	82:15 85:7	305:12 308:19
301:23 302:6	23:2 27:4 62:9	87:13 91:21,22	thinking 12:18
testy 295:6	64:23 76:14	98:7 105:8	56:22 104:16
thank 5:23 6:10	79:23 85:19	106:9 107:15	third 67:4
7:16 16:21	96:13 101:10	112:4 113:11	205:11 206:4
21:15 29:14	105:8 113:3	113:22,22	224:1
87:5,9 89:5	114:19,20	115:8,8 117:9	thought 8:19
95:3 104:5,7	119:6 123:9,12	120:8 129:22	9:8 10:4 11:3
128:8 138:10	123:12,13	131:12 137:18	12:4 13:5 15:1
146:16 148:16	130:18 133:18	139:17,20	19:15,20 20:5
193:10 216:12	135:21 143:13	140:8 149:14	21:16,20 22:20
235:7 260:13	155:18 159:9	151:9,20	23:14,16 26:12
277:22 295:5	159:16 172:1	154:14,18	26:20 37:4,5,6
295:12 305:13	199:6 201:12	156:17 162:21	62:20 64:6
306:17 309:5	204:9 205:7	164:18 168:7	82:9 87:4
thanks 61:14	210:6,13	169:16 170:6	139:2 156:8
89:13 137:3,9	226:18 235:3	171:17 172:11	165:4,6 170:8
180:17 244:20	241:3 261:11	173:13 174:16	190:22 192:9
260:20	261:16 262:11	175:3 178:1	235:10 243:16
theory 167:22	264:23 275:10	182:11 186:3	259:6 261:7
thereto 2:15	279:22 284:14	186:15 192:21	276:8 293:20
thing 8:10	285:15 289:2	193:1,20,23	306:2,14
38:17 45:10	302:2,3,6	197:20 213:11	thousand
114:13 115:7	303:14 307:3	233:2 244:9	201:13 307:9
118:19 123:5	think 7:23 8:7	245:7,13	thousands
123:15 126:20	8:13 9:10 10:3	255:15 259:14	299:17
130:12 131:9	10:5,9 18:2	259:14,19	

[three - tow]

Page 63

three 59:1 149:16 151:1 160:16 176:18 176:23 177:8 203:12 205:16 221:13,14 222:13 244:10 246:6,7 265:21 throw 35:19 233:15 thrown 84:18 tied 262:15 tilted 155:10 time 2:13,14 5:12 12:5,17 19:7,19 20:2,4 20:10 21:4,12 21:18 22:19 23:13 27:8,8 35:23 36:5 40:10 47:12,13 47:18 54:17 55:2 57:10 58:15,19 59:8 60:8 61:8,9,10 61:12 65:6 67:9 80:17 81:2,19 83:10 83:13,16 85:1 85:7 86:4 88:14 89:7,8 89:11 97:21 112:6 116:7,15 116:19 117:4 119:1 121:5	137:4,7,14 138:15 139:15 142:1 152:6,18 152:21 157:22 162:20 176:3,9 176:12 182:23 183:3 189:22 192:8 195:17 195:20 201:14 201:21 215:1 221:9,20 237:18 245:23 257:17 260:15 260:18 268:1,9 285:16 286:17 295:11,22 296:2 298:14 305:18 306:4 309:6 310:13 311:18 timeframe 20:16 311:8 times 8:13 109:17 133:11 139:21 144:9 144:15 145:23 265:22 278:4 280:19 282:1 tip 122:13,22 tipping 299:15 tire 11:19 52:11 66:13,16,17,19 67:1,8,12,15 68:21,22 78:5	title 227:14 249:19 titled 146:13 227:20 today 16:15 39:20 59:23 60:5 116:22 129:17 132:20 133:14,21 140:7 156:11 173:12 226:22 227:8,11 229:1 262:23 264:7 269:5 280:21 283:16 295:17 today's 5:11 together 198:23 199:2 203:11 228:2 242:10 256:6 262:15 265:12 267:8,8 told 28:6 35:14 38:12 40:19 45:1,9 58:18 65:5 123:6 129:2 135:10 144:21 220:1 took 19:13 20:1 20:7,8 22:19 23:7 39:14 40:7 117:3 266:15 tool 104:2,2 267:4 288:9	289:13 290:9 290:12 291:16 292:14 toolbox 82:8,11 tools 82:5,6 104:3 215:22 215:23 289:12 303:6,7 304:21 top 46:2,5 53:8 94:17 105:16 111:7 119:6 129:11 152:9 184:11 185:11 206:4 208:13 212:19 228:7,8 229:8 254:1,10 254:19 topdown 206:9 topic 225:9 287:13 total 79:6,8,15 85:17 147:11 147:13 148:3 totally 243:23 281:22 touched 25:1 touches 160:13 160:14 tow 95:17 122:12,21 131:1,15 152:17 153:7 180:1 197:9,12 198:1,3,7 203:10,11
--	---	--	---

[tow - two]

Page 64

204:23 205:4	trial 2:14	252:17 253:11	106:19 118:23
205:17,22	tried 24:5,8	283:2	125:20,23
219:19,20	26:18 27:6	trucks 167:19	126:12,15
220:5 247:11	39:1 48:7	true 10:17	135:1 137:12
247:16,21	105:9,11	17:19 19:8	137:15 144:3
251:23 252:1,5	114:19 116:8	125:8 127:2,5	148:15 158:4,9
252:8,14,16,18	134:21 138:22	143:23 149:19	164:11,12,13
252:21,23	141:5 142:14	151:17 153:15	165:17 166:8
253:8,10 254:2	156:16 306:22	180:7 182:10	169:7 172:12
254:18 255:11	trigger 220:6,6	197:2,18 204:6	180:22 192:16
255:14,15,22	trouble 128:1	213:7 233:15	192:18 193:6
256:5,5,19	243:18	266:20 268:17	194:16,22
258:1,7 261:16	trove 110:13	283:15 310:11	203:20 204:6
262:13,20	truck 64:3,5	313:8	204:18 212:15
264:22	66:10 74:23	truth 286:19	213:12 214:16
towards 182:2	77:4 80:9	try 8:6 12:20	214:21 216:15
towed 224:5	102:20 106:21	16:3 40:4 44:5	244:22 245:1
track 210:11	110:14,16	44:6,6,10 49:5	272:12 296:15
tractor 308:4	132:1 150:10	56:12 85:3	298:13 302:13
trailer 308:5	161:8,10,12	102:14 130:10	turn 109:3
train 292:20	163:15,16,17	165:18 207:13	127:21 128:2
training 112:17	165:13,14,15	235:3,8,13	226:19,20
transcript	165:16 166:10	236:11 248:18	228:7,8
262:23 310:9	166:13,16,21	269:22 277:7	tweaked
310:12 311:6	167:4,5,10,11	282:6 295:9	189:14
311:19 313:5,8	167:17,18	302:10,19	twelve 85:23
transfer 75:18	168:6,23	trying 12:21	87:7,19 135:3
159:16,17	171:10,13,15	20:13,15 23:1	136:3,9 229:19
160:4	173:11 199:4	34:6 43:5,9,13	266:9 267:20
trash 28:10	201:12,14	43:13 53:17	268:11,21
traveling	203:8 220:23	56:3,10 59:5	273:19
166:10	221:5,19	60:16 62:20	twenty 145:23
treasure	228:10,13	83:20 92:5	twice 180:16
110:13	229:7 231:17	93:7 96:13	two 11:17
	233:12,13,17	103:3 106:5,18	20:23 22:6,10

[two - update]

Page 65

37:13 38:10 39:11 58:8 76:14 95:20 96:10,22 99:3 103:15 104:3 104:12,13 105:10 107:20 110:21,21 148:13 149:6 153:6 156:17 158:19 165:20 167:19 171:17 176:19 178:16 179:1 198:19 198:23 200:11 200:13 205:3 218:11 221:13 224:9 227:18 228:6,19 231:7 236:12,22 238:18 239:9 241:8,10 253:19 265:21 270:8,9 271:20 272:2 275:10 281:18 289:18 307:11 308:16 type 21:6 28:9 70:4 71:10,19 72:3,7 110:10 115:12 123:15 129:1 136:16 155:13 156:16 158:22 160:5,8 166:10 172:6	174:4,7 218:20 237:15 281:10 297:11 300:14 300:15,16 303:1 typed 75:9 types 37:14 123:9,11 289:1 303:7,14 typically 94:2 159:1 typing 297:10 297:18 typo 75:5 u uh 27:11 163:4 187:18 ultimately 65:12 un 203:17 uncertain 161:18 uncomfortable 281:23 uncommon 28:8 undamaged 256:15 under 12:15 32:20 40:2 147:10 166:1 197:10 213:7,8 216:17,18 219:3 291:6 310:10	understand 40:7 45:23 50:18 51:13 60:19 61:23 62:20 75:12 76:7 84:6 93:17 106:20 118:5 121:10 138:14 141:20 143:14,16 156:12 162:11 165:14 166:6 169:18 170:5 172:3 176:17 186:21 194:23 194:23 201:1 205:5,12 243:15,17,23 269:20 283:16 283:17 291:15 291:18 understanding 15:11 29:21 30:1,20 37:9 93:22 94:14 112:6 194:5 243:18 266:6 266:13 understood 25:11 47:14 177:12 219:18 219:20 undertake 191:19 273:13	undertaken 274:23 uneducated 233:20 unequivocally 225:4 290:21 unexpected 151:1,6 unforeseen 7:19,21 8:11 unfortunately 20:3 unibody 95:10 uniquely 94:21 united 1:1 4:1 unknown 101:9 unlifted 163:16 164:15 165:19 165:21 167:5 167:11,16 168:22 unnecessary 274:10 unrelated 43:18 unreliable 129:20 unrepresentat... 129:20 unresponsive 121:8 unsuccessful 38:1 update 54:20 63:21
--	---	--	---

[updated - using]

Page 66

updated 57:16	173:6,11	28:13 30:22	238:13,14
updates 53:13	181:11 185:1,4	36:22 38:1,14	244:5,6,7,11
53:16 54:3	189:22 190:2,9	38:15 39:3	246:2,12,18
updating	190:14,19	40:12 42:6	256:4,5,18
297:17 299:2	193:3,4 194:7	48:6,11,11	258:15 260:23
upwards	197:14 199:16	55:20 59:13	261:15,15
243:14	202:15,17	62:1,12 63:21	262:5,10,11
usage 305:16	203:18 205:9	67:12,18,20	263:1,6,13
use 7:18 12:23	206:21 213:22	68:18 74:16,20	264:13,20
23:1 25:20	214:19 215:4	75:1,4,20 76:2	269:5,15
39:1,12 41:12	217:5,18 220:8	76:3,13,23	273:18 276:14
41:18,18,19	241:16,20	77:5,15 78:1,2	277:7 281:15
42:10 43:8,16	242:10 244:17	78:16 79:7	282:19 284:9
44:6 50:4 51:2	246:4,6 247:17	82:19 85:22	286:7,8,12,14
51:15,16 52:18	247:17,19	86:21 87:3,7	288:12,20,22
57:3 59:17,18	261:10,18	88:1,8 89:15	289:23 290:11
60:6,7,9 62:17	262:17,18	89:20 90:6	291:10 292:6
64:12 65:1,3	263:18,19	92:7 98:8	301:12 302:14
66:9 80:9	265:6 267:23	104:10,15	303:14 304:15
86:18 87:18	271:7 275:14	108:19 109:11	305:4 311:19
91:3,4,15	276:13 281:6	109:14,17	useless 118:11
108:10 109:18	281:10 282:2	114:17 116:10	user 31:17
109:20 111:3	282:13 283:23	138:23 141:14	90:17 301:19
111:16 112:13	284:13 286:15	142:6 144:5	uses 159:14
112:16 113:2,2	288:10 289:1,6	145:13 147:1	178:14 223:17
118:17 126:5	289:7,9 290:5	159:3,3 163:1	271:14
126:16,18	290:18,22	171:19 174:9	using 9:21
129:14 132:21	291:3,17	176:18 178:12	17:10 23:22
135:23 136:6	292:12,23	185:15 186:17	25:9 26:6,15
139:9,14,16,18	295:2,20	189:3 190:15	26:17 28:1,7,9
140:11 142:10	297:17 300:9	192:23 194:8	29:9 37:6 44:8
143:7 145:15	302:10,15	202:8 203:9	53:6 56:5
156:16 164:15	305:1 307:5	205:7,9,13	59:20 60:1
170:22 172:8	used 14:23	209:12,12	62:16 63:20
172:12,19,22	18:23 21:21	218:10 237:15	72:19 87:15,21

[using - vehicles]

Page 67

94:7 98:6 102:7 104:16 104:22 106:23 109:6 110:1,8 110:23 111:1 112:5 130:1 140:3 154:6 162:1 163:8,11 163:13 170:22 177:15 190:21 192:7,13 194:4 199:15 202:12 203:9,13 206:7 210:5 212:16 213:2 215:6 216:14 217:12 217:20 229:23 230:20 242:19 245:10,12 246:11,22 247:13 256:9 261:6 262:13 262:16,20 264:22 265:20 273:16,19 281:15,21 285:14,23 286:6,11 288:11,20,21 289:14,18,19 290:3,10 292:14,20 297:21 298:1 300:8 301:5,7 301:20 302:19	usually 36:11 201:23 300:2 300:19,22 utilized 288:22 v v 39:6 110:23 288:18 311:4 312:1 313:1 v's 39:18 110:15 112:13 113:4 170:13 285:22 vacuum 233:20 vague 21:10 151:8 283:4 285:8 305:20 valid 110:10 114:21 129:4 286:23 290:9 290:12 validate 11:22 24:6 111:15,23 285:17 292:23 validation 292:9 valuable 135:13 value 93:5 129:8 172:16 172:17 values 65:7 66:9 variable 100:22 165:21 284:9	variables 100:13 102:1 126:14 274:11 274:11 variation 278:18 variations 299:16 varied 167:5 294:10 various 162:9 300:14 302:21 vehicle 63:5,14 64:19 65:2,11 66:8 70:12 77:15,22 78:12 78:22 79:18 80:6 81:12,15 82:22 83:5 84:18,19 85:1 85:5,14,17 89:20 90:5 91:4,5,12,16 92:2 93:9 94:3 94:4 104:23 107:2,3 131:2 149:21 151:14 151:14 157:22 158:21,23 159:12 160:1 160:21 161:2 163:12 164:14 164:15 170:19 177:15,15 185:19,19	194:13,14,15 197:17 200:8 200:10 202:4 204:3,15 216:19 222:23 225:5 236:20 254:5 259:23 261:9 265:16 285:2 286:1 300:11 301:7 302:10 308:10 308:10,11,13 vehicle's 203:3 228:12 289:7 vehiclemetrics 62:4,6,8,16,21 63:10,18 64:19 65:12,19 66:5 74:22 75:5,7,8 75:15,21 78:2 vehicles 62:9 62:23 74:20 78:17 91:7 94:19 95:20 96:22 97:8,11 97:15,20 98:9 98:12,15 104:9 104:11 108:18 110:1,6,21 115:18 149:18 149:19 150:4 150:14,20 159:9 174:7 198:20,23 203:10,18
--	---	---	--

[vehicles - want]

Page 68

210:10 216:7 226:7,19,20 227:15,21 228:2,6 229:16 230:12,23 231:7,23 232:23 237:3 238:11 241:1 246:22 263:3 264:10,15 265:12 267:6,7 267:8,11 274:16 284:12 288:15,16 297:15,16 299:17 300:6,8 300:14 301:4 304:16 306:18 307:1,8,23 308:7 velocity 298:17 vendor 62:9 63:10 verbally 221:12 221:12 223:14 verified 31:3 48:10 77:3 verify 17:1,22 46:11 68:9 109:12 191:19 198:2 250:16 278:22 285:21 287:23 288:8 291:20,23 311:9	verifying 278:13 veritext 311:14 311:23 veritext.com. 311:15 version 34:10 52:17 53:6,10 53:17,18,20,22 53:22 54:4,5 54:17,18,20,22 55:2,15,16 56:1,5,6,18 57:1,2,15 58:21 59:9,12 59:13,18,22 60:1,2,5,8,10 60:22 versions 53:13 55:19 56:13 59:1,14 versus 121:3 165:18 175:16 175:16 190:19 247:12 249:5 250:17,19 251:7 vertically 200:18,19,23 vet 288:22 video 4:22 61:10,13 89:8 89:12 137:5,8 146:22 156:17 160:9,12	176:10,13 183:1,4 195:18 195:21 205:19 206:5,8 211:9 211:16 212:2 215:20 220:22 233:13,17 234:17 237:9 242:21 245:21 videoconfere... 5:6 videographer 5:11,23 61:9 61:12 89:7,11 137:4,7 176:9 176:12 182:23 183:3 195:17 195:20 260:15 260:18 295:22 296:2 309:8,11 videos 243:13 videotaped 5:13 309:12 view 206:10 226:16,18 258:20 viewing 226:16 226:21 virtually 300:10 visible 177:16 185:14 193:21 visual 97:6,9 114:18 148:23 186:20 189:15	272:12 303:17 visualize 194:13 236:11 visually 14:13 96:14 97:4 272:8 voice 138:1 volume 74:21 89:22 127:21 138:1 vs 1:9 w wait 125:9 waived 2:3,18 walked 21:19 want 15:10 17:14 25:10 31:18,19 32:20 32:20,22 33:10 33:22 35:16 42:8 46:11 51:2 59:17 60:19,23,23 61:3,20 72:4,9 73:19 88:20,21 91:3 99:1 107:18 121:17 121:18 126:1 129:12 134:9 135:6 141:3 142:16 143:15 152:15 158:13 169:10,17 172:3 179:10 205:12 215:2
--	---	---	---

[want - went]

Page 69

222:9,14,17	45:12 47:1	ways 73:7	83:14 84:16
226:23 227:1	50:12 52:7	94:20 160:7	85:1 299:10
234:12 241:10	73:11 75:3	193:23 216:23	306:23 307:1,2
241:14 242:13	79:16,20 101:7	218:21 236:12	307:8,12
247:17,23	102:16 103:10	263:9 265:21	weight 63:6
250:15 251:17	107:15 108:21	265:23	78:12,16,20,20
265:17,22	109:4 120:14	we've 10:8	78:22 79:2,7,8
267:9 268:17	121:23 122:11	14:11,19 50:3	79:15,18,21
268:23 279:23	130:7 144:5	61:2 68:7,7	80:1,4,21
287:20 291:13	152:13 155:10	76:1,13 77:23	81:20 82:5,8
303:9 308:14	165:19 166:2	79:22 108:21	82:17,19,21,21
309:14,16	168:19 170:11	114:12 124:22	83:2,7 84:15
wanted 40:4,4	171:11 172:20	128:16 130:17	85:5,11,16
41:4 48:9	180:17,18	132:3 135:5,10	104:17,18,19
50:23 51:11,23	184:19 187:10	136:14 137:18	104:20,23
52:8 63:8 69:1	201:10 203:14	138:23 139:21	299:10,14,15
73:8,10 88:1	204:15 207:20	141:2 151:20	299:19 300:7
92:15 103:1	213:5,5 216:22	159:5,8,8	300:10,16
107:11 115:15	217:21,22,23	197:7 225:11	306:12 307:22
130:6 153:13	218:19 219:20	248:4 259:5	308:20
173:1 251:18	223:15 226:16	270:4,21 277:4	weights 39:17
272:10 307:10	237:4,14 243:3	277:11 281:23	79:12,23 80:6
307:10	243:17 244:16	284:8,8 285:11	104:8,9,10,15
wanting 136:9	251:1 252:22	287:11,12,15	293:11 306:22
wants 34:17	253:8 256:4	300:12 308:4,9	307:13,19
53:20 56:6	257:15 261:7,8	week 12:9 20:3	308:20
73:8 98:8	268:5 276:10	47:22	weinberg 4:10
114:18 166:13	280:6 281:1	weeks 20:17	went 8:3 9:18
193:3 261:19	282:2 288:2	23:8 44:18	11:8 12:17,18
272:23	291:19,22	58:15	18:15,16,18
water 299:23	292:15,23	weigh 81:22	24:21 54:20
way 12:19 15:1	293:7 294:2	82:14 299:17	64:23 95:11,17
18:9 25:1	298:7,17	300:6,17	113:10 119:20
27:13 34:20	301:16 306:5	weighed 78:22	148:6 190:21
39:19 41:17	306:11,12	81:2 83:5,10	217:9 218:15

[went - worried]

Page 70

234:13 243:14 257:13,15 265:17 267:3 268:10 wes 44:15 45:7 west 4:15,19 whatnot 155:9 161:17 243:13 302:21 wheeler 4:11 whichever 194:15 white 220:7 252:20 253:14 254:1,14,19,19 wholeheartedly 234:2 wide 257:5 width 207:10 207:13,16 272:17 275:10 275:12 281:17 281:18 282:10 282:10,15 284:19 wiggins 4:22 wild 287:21 willing 116:13 282:4,5 wimbledon 295:13 window 175:16 208:22 239:17 windows 226:19,19	wishful 56:22 witness 2:3 5:7 6:2 61:6 89:5 95:3 125:23 136:23 137:3 175:22 176:4,8 182:22 223:6,9 223:12 248:13 250:3,12,16,20 251:2 295:13 309:7,16 311:8 311:10,12,18 wold 181:23 wondering 104:22 word 9:23 43:8 48:14 126:6 174:9 183:19 184:2 186:19 187:4 189:23 191:2 298:1 words 14:15 16:13 40:3 42:5 48:15 62:16 79:12 91:2 147:15 150:8 167:13 168:10 175:1 200:12 202:13 223:17 227:14 231:12 267:10 268:5 283:8 297:3 301:10 work 13:2 18:4 19:18 24:16,18	25:4,19,20,20 25:20,21 26:7 27:2 28:10 32:19 34:21 35:14 39:15 43:1,3,9 44:3,4 44:5,11,12 51:14 52:8 55:12 56:4 73:17 84:1 88:21 96:12 103:3 108:22 109:5,5 117:10 117:10 118:4 120:4,7 123:14 127:7 128:5,21 131:9,10,13,14 131:17 132:8 132:21 133:3 133:13 141:5 141:20 142:13 142:13,14,20 145:4 159:19 163:10 166:3,3 171:1,4 172:11 173:1 174:11 175:4 177:1,2 177:5 182:22 190:17 198:12 199:7,10,16,16 199:17 208:5,6 217:17 218:20 220:15 224:23 225:1 226:4,17 227:8 228:1,6	228:20 229:13 232:5 242:13 243:9,12 244:12,12,14 246:3 247:1,4 247:4,6,7,7,20 257:2 261:6 262:19 266:22 266:23 267:15 267:16,22 270:19 274:23 283:18 292:3 292:19 296:7,9 297:13 305:17 307:17 worked 43:6 226:17 268:5 working 19:14 19:20 27:4 28:9 35:15,16 35:19,22 39:6 48:5 53:18 57:11 167:8 257:6 259:21 296:22 299:4 works 283:17 292:1 298:7 world 92:18,20 98:23 101:4,5 101:6,21,22 103:12 294:13 294:16 worms 293:3 worried 81:17 88:6 102:9,10
---	---	--	--

[worry - zooming]

Page 71

worry 122:16 worrying 306:21 worse 230:4 worst 103:1 130:8 163:13 171:22 worth 43:22 58:15 300:1 wreck 70:18 71:4 260:8 301:3 write 47:15,20 188:4,8 writing 26:5 written 266:15 267:13 273:17 281:20 282:12 285:17 wrong 11:1 49:10 68:15,22 69:19 135:10 178:13 215:17 220:3 221:15 221:15 224:22 225:9,15 298:17 wrote 25:22 28:5 36:2 68:12 168:21 184:20	xlt 187:19	248:21 249:14
	y	249:23 250:14
x 3:1 110:22,23 201:21 229:10 279:21	y 229:10,11 279:21 y'all 188:3 195:12,13 yeah 10:17 16:21 20:11 24:17 42:13 45:22 50:2,17 52:19,21 53:15 55:1 58:18 61:6 66:23,23 69:17,20 70:11 76:21 77:9 81:8 89:20 91:8 94:7 102:4 103:23 105:1 128:9 129:10 138:14 140:5 146:5 149:8,11,21 153:18,20 156:3 174:1,10 175:7 177:9,10 179:20 181:4 184:15 185:9 188:5 190:8 194:15 198:5 205:15 210:3 221:3 223:7,12 228:23 230:22 231:2 234:22 235:4,5 238:8 244:5 245:17	251:2,22 253:4 253:16 257:22 259:10,16 270:3,8 277:23 278:17 280:23 286:15 305:21 306:16 308:1 year 53:10 76:2 300:11 years 285:14 288:21 290:3 292:6 yelling 125:22 yellow 177:18 218:11 235:16 yep 148:14 223:12 250:3 254:13 257:13 268:20 306:16 yesterday 247:16
		z
		z 229:11 279:21 zero 232:9 zoologist 109:2 zoom 227:12 241:20 252:19 zoomed 228:3 zooming 243:1

Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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